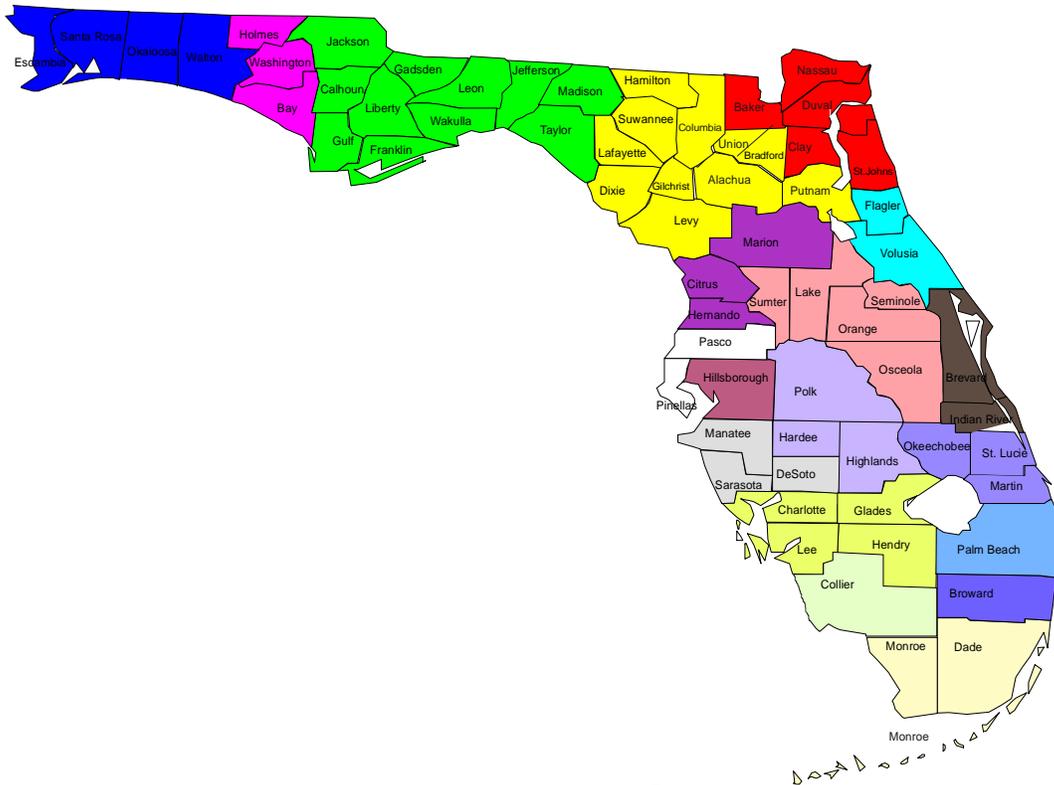


# Trauma Service Area Study

## Year 2000

### DRAFT



January 10, 2001

## Executive Summary

Chapter 395.402(3), Florida Statutes, requires the department to assign Florida's 67 counties into trauma service areas (TSA's) for planning and developing systems of trauma centers. This statute requires a periodic review of these assignments, including a mandatory review in the year 2000.

The department initiated the process for establishing trauma service areas through a 1990 study entitled "A Report and Proposal for Funding State-Sponsored Trauma Centers," which became the basis for legislation and a statutory change in the same year. In the legislation that became law, all 67 counties were assigned to one of the 19 trauma service areas. In conducting the research that led to the assignment of the 67 counties, the 1990 study was built on the idea that counties should be assigned based on where trauma patients are taken for their trauma care. In developing this concept, 19 counties were identified as nucleus counties. These 19 counties provided trauma care to a large percentage of their own residents but also provided trauma care to neighboring counties or, in some cases, had the potential of providing care to neighboring counties. If a county was not one of the 19 nucleus county, they were considered to be a sending county or, as referred to in this study, a "feeder county." All nucleus and feeder counties were configured into the 19 service areas, which were considered to be rational service areas in terms of their ability to provide trauma care.

To comply with the mandate to review the assignment of all 67 counties into the 19 service areas, the department undertook a process similar to what was used and reported in the 1990 study. Injury severity scores (ISS) were calculated using 1998 Agency for Health Care Administration (AHCA) hospital discharge data. (Appendix G) As was used in the 1990 study and report, only trauma patients with an ISS score of 9+ were included in the analysis. In reviewing the data for each county, the following rules based on point origin and destination were applied:

- Rule 1. Counties should be assigned to service areas based upon the rate of retention of resident trauma cases and the county of destination for the majority of outbound trauma alert patients (i.e., ISS 9+).
- Rule 2. Counties that retain at least 90 percent of their resident trauma alert patients should be considered nucleus counties for the formation of service areas.
- Rule 3. Counties that retain more than 75 percent but less than 90 percent of resident trauma alert patients should be considered candidates for nucleus county status only if there is no contiguous county with a 90 percent retention rate; otherwise, these counties should be grouped with the county receiving the majority of outbound trauma.
- Rule 4. Counties that retain less than 75 percent of their trauma alert patients should be grouped with the county that receives the majority of outbound cases.

The year 2000 study showed that very little has changed since the 1990 report. Nucleus counties identified in the 1990 report continue to serve the role of caring for a majority of their own residents as well as for neighboring counties. Feeder counties have demonstrated little change as to the nucleus counties to which trauma patients are being transported. This study recommends that the 19 trauma service areas established in 1990 continue to be recognized as currently constituted in statute for the purpose of planning and developing a system of trauma centers.

Trauma Service Area Study  
Year 2000 Report  
Study Results

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# **Trauma Service Areas Year 2000 Study Results For Rational Trauma Service Areas**

## **Introduction:**

As part of the department's initiative to plan and develop an inclusive trauma system, the Department of Health completed a study and a related 1999 report entitled "Timely Access to Trauma Care." This report addresses the question as to how to best ensure that patients requiring trauma care have timely access to trauma center care. According to national experts, the key to saving lives of seriously injured people is to rapidly transport those people to a facility that is staffed and equipped to provide immediate evaluation and treatment. Rapid care has been described as the "Golden Hour." This time period is generally defined as the time from the point that a person is seriously injured to the point that the injured person is delivered to definitive care. In many instances, this hour is reduced to precious minutes.

The Timely Access to Trauma Care Report deals with a number of important issues including critical components, such as having adequate EMS transportation systems and the strategic location of trauma centers. One of the primary transportation considerations relates to having adequate regional air services. **Appendix A** shows where EMS helicopter transport systems are currently located and it demonstrates the approximate flying range of 30 minutes to provide EMS care at the scene of injury. Though these 30 minute flying time circles on the chart span large portions of the state, there are still large areas of the state that have no coverage. This is particularly true in north Florida. The second major issue is the strategic location of trauma centers that are staffed with highly trained personnel and supported with life-saving equipment—all very essential components to saving lives. An integral part of the need to having trauma centers strategically located encompasses the concept of trauma service areas. Trauma centers must be located where they can best be accessed and in sufficient number to serve a designated population. The next section on trauma center location provides additional discussion relative to the number and location of trauma centers.

The Timely Access to Trauma Care Report lead to a number of significant changes in 1999 to Florida Statutes. One of the statutes amended, Chapter 395.402(3), Florida Statutes, required the department in the year 2000 to review the 19 established trauma service areas included in Chapter 395.402(3)(a), Florida Statutes. These 19 service areas were established for the purpose of planning and developing a statewide trauma system, including a network of state-approved trauma centers to help ensure the strategic location of trauma centers. The primary purpose of the review is to determine if the 19 trauma service areas, which encompasses all of the 67 counties, continue to be rational service areas. The review examined all 67 counties in terms of how they have been configured into service areas. The current trauma service areas and the counties included in each service area are included in **Appendix B**.

## **Demographics: Trauma Center Location:**

Currently, there are 20 trauma centers in Florida. **Appendix C** includes a map that shows that Florida's state-approved trauma centers are located in the urban areas. A trauma center is a hospital that has made the commitment to have the resources, both staff and equipment, immediately available for treatment of severely injured persons. Because of the substantial financial commitment made by a hospital to be a trauma center, patient volume becomes an important factor for a hospital in terms of being financially viable and having enough work for trauma surgeons to maintain their skills. The old adage of practice makes perfect is particularly applicable to those treating the seriously injured trauma patient. The American College of Surgeons (ACS) recommends that a Level I trauma center treat annually 600–1000 trauma

patients and a Level II trauma center treat 350–600 trauma patients annually. To meet these caseload recommendations, locating trauma centers in areas where skill levels can be maintained by trauma surgeons is an important factor. Furthermore, to recruit and retain well-qualified surgeons to work in a trauma center, it is important to have a sufficient number of patients to treat, especially to the surgeon. The creation of the current 19 trauma service areas took into consideration such issues as sufficient population to serve, road transportation systems, and in some cases, natural land features that might make timely transport difficult. **Appendix D** provides a population distribution for each of the 19 service areas recommended in this study. This appendix also provides information relative to the number of trauma patients and their injury severity level for each county located in the trauma service area.

### **Background: The 1990 Study and Report:**

Trauma Service Areas (TSA's) were established in Florida Statutes pursuant to the document entitled "A 1990 Report and Proposal for Funding State-Sponsored Trauma Centers." The 1990 report, which is referenced in Chapter 395.4025(1), Florida Statutes, includes extensive research that led to the formation of the 19 trauma service areas. This report also identified a statewide need for 44 trauma centers and the funding needs to reimburse trauma centers for uncompensated trauma care. Research for the report included a methodology for establishing rational trauma service areas within which systems of trauma care could be planned and developed.

The methodology in the 1990 report contained criteria and rules on how TSAs should be determined. These rules and criteria were applied to the 1988 patient discharge data obtained from the Agency for Health Care Administration (AHCA). Discharge data selected were for patients with a primary or secondary discharge diagnosis in the ICD-9 CM N code range 800.0 to 959. The 1990 report identified 103,644 trauma patients from the 1988 database. An Abbreviated Injury Score (AIS) and an Injury Severity Score (ISS) was calculated for each trauma patient. Using this methodology, the more severely injured patients who may require trauma center care were identified. The more severely injured trauma patients were defined as those who had an ISS score of nine (9) or greater. Approximately one half of the trauma patients in the ICD-9 CM N code 800 to 959 code range had an ISS score of 9+.

One of the primary concepts in the 1990 study for determining trauma service areas included the concept that counties where a high proportion of their residents receive trauma care for all levels of traumatic injuries within the county would most likely be good candidates for development of state-recognized trauma centers. Also, counties that receive a large net inflow of trauma patients from other areas were considered to be good candidates for development of a trauma center network. These concepts led to the development of the following rules that were applied to the AHCA data to identify counties that are referred to in this study as "nucleus counties" as well as those counties that either primarily send or receive trauma patients:

- Rule 1. Counties should be assigned to service areas based upon the rate of retention of resident trauma cases and the county of destination for the majority of outbound trauma alert patients. (i.e., ISS 9+)
- Rule 2. Counties that retain at least 90 percent of their resident trauma alert patients should be considered nucleus counties for the formation of service areas.
- Rule 3. Counties that retain more than 75 percent, but less than 90 percent, of resident trauma alert patients should be considered candidates for nuclear county status only if there is no contiguous county with a 90 percent retention rate; otherwise, these counties should be grouped with the county receiving the majority of outbound trauma.
- Rule 4. Counties that retain less than 75 percent of their trauma alert patients should be grouped with the county that receives the majority of outbound cases.

In this study, these rules were initially applied to identify nucleus counties. As indicated in the above rules, a nucleus county could be one that retains as few as 75 per cent of their trauma patients. More likely candidates to be a nucleus county were those with a 90 percent or greater retention of trauma patient residents. In the 1990 report, 20 counties were identified that had high retention rates and were considered potential candidates to be nucleus counties. All of the counties selected had a retention rate of greater than 85 percent. This number was later adjusted to 19 counties, with the addition of Marion County and the deletion Indian River and Charlotte counties since both of these counties are very rural and probably would not make a strong nucleus county capable of receiving trauma patients from neighboring counties.

The next step, after identifying the nucleus counties, was to group with nucleus counties those counties that had a history of sending their injured patients to a neighboring or adjacent nucleus county for trauma care. These counties are referred to as “feeder” counties.

In configuring the 67 counties, exceptions were made on how the rules were applied for a few counties, since clear lines for assignment into TSAs did not always develop. For those cases, a technical assistance committee (TAP) selected to work with the department on this study made best judgment decisions as to how counties should be grouped to have rational serve areas.

### **Year 2000 Study and Report:**

To conduct the year 2000 review of the trauma service areas as mandated in Chapter 395.402(3), Florida Statutes, rules, concepts, and methodologies were applied similar to those used in the 1990 study. To complete this study, the following process was followed:

1. Hospital Discharge Data Obtained – 1998 hospital discharge data was obtained from AHCA. An updated version of the ICD-9-CM was used. The year 2000 study used ICD-9-CM '90 Coding for trauma patients in the 800-959 series.
2. Injury Severity Scores Computed-To identify the more severely injured trauma patients, software was purchased and applied that would compute ISS scores for each patient. Trauma patients with an ISS score of 9+ were identified.
3. County of Residence and County of Treatment Determined-Trauma patients were identified by county of residence and by the county in which trauma care was provided.
4. Percentage of Retention Calculation by County–A percentage of retention (Based on percentage of injured patients cared for within their resident county) was calculated for each county. This process was used to help to determine which counties are nucleus counties and which ones are “feeder” counties.
5. Nucleus and Feeder County Analysis–In this process, counties were grouped as either nucleus or feeder counties.
6. Comparative Analysis of this Study with the 1990 Study-The results of the year 2000 study were compared with the results of the 1990 study.

There were 122,954 trauma patients identified by county of residence and by county of injury. To identify the more severely injured patients, software entitled ICMAP–90 was used. Johns Hopkins University and Tri-Analytics, Inc. developed this software which was released in 1998. This software is reportedly an improvement over the ICD-9 –CM/AIS '85 Conversion Table that was used in the 1990 study. The ICMAP–90 software is designed to produce better results, especially in terms of its specificity. With the application of this software, of the 122,954 trauma

cases, 51,629 cases had an ISS score of 9 or greater. As occurred with the ICD-9 CN '85 software, ICMAP-90 also produced cases for which an ISS score could not be computed because of missing elements required to compute a score. Of the 51,629 cases with an ISS score of 9 or greater, there were 2,833 cases for which an ISS score was not generated. These cases were not used for county allocations.

The next task was to compute retention rates for each county: the percentage of residents within a county who were being retained for trauma care within their home county. The results are summarized in **Appendix E** which is entitled "Analysis of Rate of Retention of Trauma Patients by County."

As shown in **Appendix E**, less than half of the counties have the potential of being a "nucleus county." Table I identifies those counties that have potential of being a nucleus county by meeting one or more of the five (5) criteria presented earlier in this document. Twenty-seven counties met the minimum criteria of retaining at least 75 percent of their residents for care within their county. Only 11 counties retained 90 percent or more of their injured residents for care within their county.

**Table I**  
Percentage of Retention

<b>Name of County</b>	<b>75 - 89 %</b>	<b>90+%</b>
<b>Alachua</b>		95
<b>Bay</b>		95
<b>Brevard</b>	88	
<b>Broward</b>		91
Charlotte	80	
Citrus	78	
<b>Collier</b>	82	
<b>Duval</b>		93
<b>Escambia</b>		97
Hernando	75	
<b>Hillsborough</b>		94
Indian River	85	
Jackson	81	
<b>Lee</b>		91
<b>Leon</b>		95
Manatee	80	
<b>Marion</b>	84	
<b>Martin</b>	84	
<b>Miami-Dade</b>		96
Okaloosa	82	
<b>Orange</b>	84	
<b>Palm Beach</b>		95
<b>Pinellas</b>		96
<b>Polk</b>	86	
<b>Sarasota</b>	89	
St. Lucie	76	
<b>Volusia</b>		90

Note: Counties in bold letters are those counties that are currently identified as nucleus counties and are recommended in this study to retain that role.

There were only three differences from the 1990 study results. The 1990 study identified 28 counties that had retention rates of less than 75 percent. Highlands and Lake Counties were identified in the 1990 study with rates greater than 75 percent, but not in the 2000 study. Hernando County was identified in the 2000 study as a county with a retention rate of 75 percent.

All 19 counties that were identified in the 1990 study as nucleus were identified as nucleus counties in the 2000 study. See Table II below for the percentage of retention of trauma patients.

Table II  
Nucleus Counties

<u>County</u>	1990 Study Patients Retained	2000 Study Patients Retained
Alachua	94%	95%
Bay	95%	95%
Brevard	93%	88%
Broward	90%	91%
Collier	91%	82% (c)
Dade	96%	96%
Duval	96%	93%
Escambia	93%	97%
Hillsborough	89%	94%
Lee	91%	91%
Leon	95%	95%
Marion	88%	84%
Martin (a)	N/A	84%
Orange (b)	95%	84% (c)
Palm Beach	91%	95%
Pinellas	96%	96%
Polk	90%	86%
Sarasota	91%	89%
Volusia	87%	90%

- (a) A percentage was not available in the 1990 report.
- (b) The decrease in the percentage of retention of trauma patients in Orange County could not be identified. However, it is known that trauma centers were established in adjacent counties and there were systems changes in the management of trauma patients in the trauma service area.
- (c) Trauma center established in adjacent county, since last TSA study.

A review of the patients retained for each of the 19 counties indicates that some percentage changes have occurred in the nucleus counties. Those counties where the most significant changes have occurred, a trauma center has been established in the adjacent county.

A second analysis reviewed the relationship of nucleus counties and feeder counties. In building a trauma system, the relationship between nucleus counties and feeder counties remains an important factor for planning and developing a trauma system. An analysis of nucleus/feeder counties is included in **Appendix F**. The relationships between nucleus counties and feeder counties, remains virtually unchanged between 1990 and 2000. It was found that counties sending patients to nucleus counties identified in the 1990 report continue to do. Data is not available that provides for the percentage in retention of trauma patients

between 1990 and the 2000 study. Consequently, we do not know whether feeder counties are sending more or less patients to the nucleus counties. Based on the lack of percentage change in the nucleus counties, it is anticipated that there continues to be a strong nucleus/feeder relationship, or in some cases, a potential relationship for the purpose of trauma systems planning as was presented in the 1990 study.

### **Conclusions:**

- No change in trauma service areas should be made at this time. This study found that minimal change occurred in those counties identified as nucleus counties. Furthermore, the relationship between nucleus counties and those identified as sending or “feeder” counties remains intact.
- The 19 trauma service areas should continue to serve as the geographical basis for the allocation of the 44 authorized trauma center slots.
- The 44 authorized trauma center slots in Chapter 395.401 Florida Statutes should remain as the maximum number required to meet trauma patient care demands.

### **Follow up Studies:**

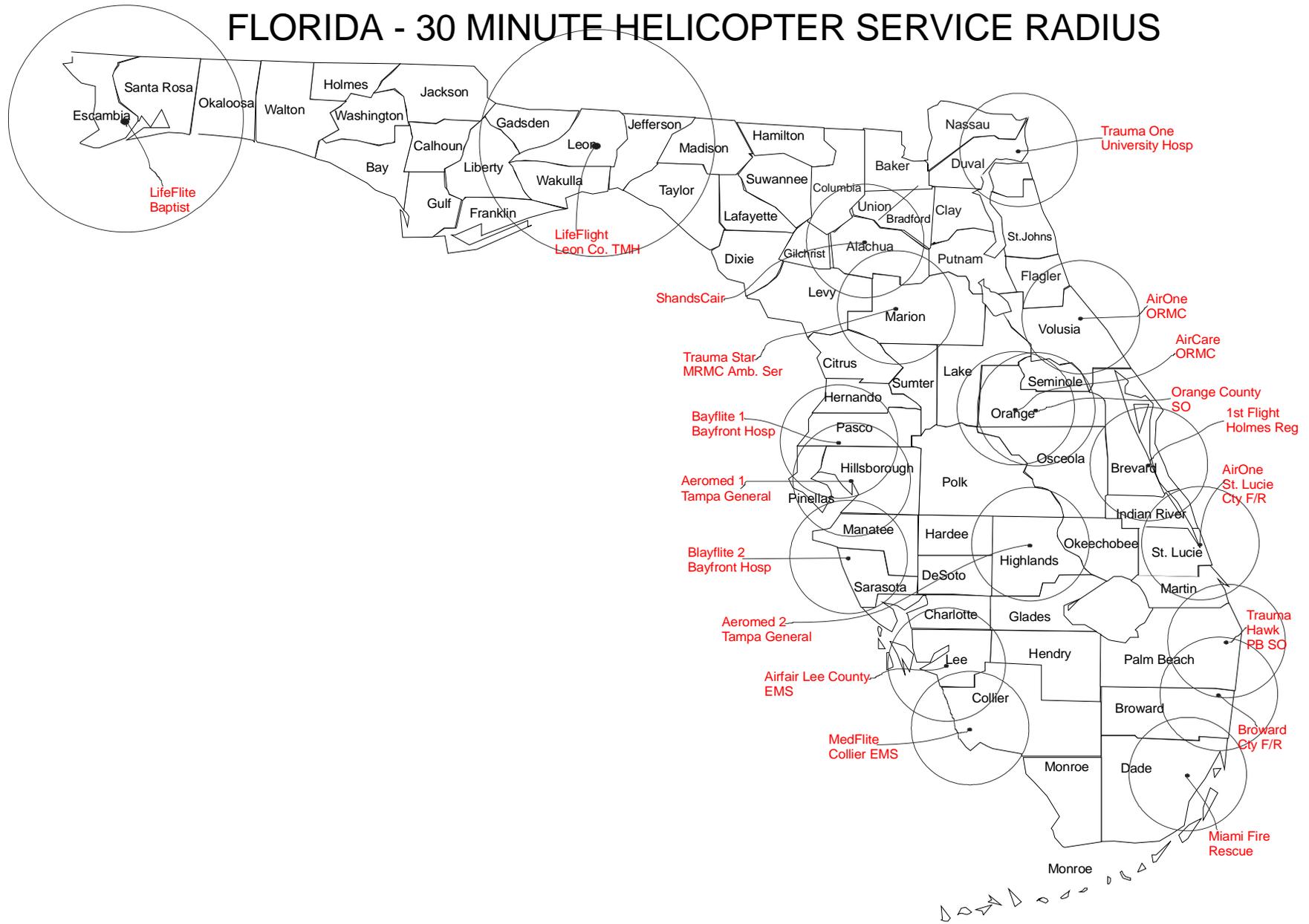
- The Department of Health should continue to study and review the trauma service areas and to determine if different county configurations might lead to more timely access to trauma care for severely injured patients.
- The retrospective measures for identifying the more severely injured patients should be investigated. There are studies that suggest that ISS scores may not be the most accurate method of identifying the more severely injured trauma patient from a retrospective basis. Improved methods of identifying the more severely injured trauma patients may lead to different configurations in how counties or parts of counties are grouped to best ensure timely access to care.
- Several trauma service areas exhibited a dramatic increase or decrease in the number of trauma discharges from the 1988 data compared to the 1998 hospital data. Trauma service area 5 showed a substantial decrease in trauma with a 14 percent population increase. Trauma service areas 6, 9, 13, 14, and 16 exhibited increases in trauma discharges higher than the percentage of population increase. Trauma service areas 3, 11, and 19 exhibited a decrease in trauma discharges with significant population increases. These variances will require further study and investigation as to the cause of change. The rate of homicides, falls, traffic crashes, and mass casualties need to be analyzed for these areas as well as the impact on availability transportation and existing trauma center care.

## Glossary of Terms

### Terms and Definition

1. “Feeder County” – Term used in this study to describe those counties that send their trauma patients to a neighboring nucleus county for trauma care.
2. ICD-9-CM – Means the “International Classification of Disease, 9<sup>th</sup> Revision, Clinical Modification”, March 1989, U.S. Department of Health and Human Services Publication No. (PHS) 89-1260; an internationally applied method by which diseases or groups of medical conditions or injuries are coded for the purpose of statistical analyses.
3. Injury Severity Score (ISS) – Means the sum of the squares of the highest AIS-90 code in each of the three most severely injured body regions. The method for computing ISS is found in the “Abbreviated Injury Scale 1990 Revisions.”
4. Nucleus County – A county where hospitals provide trauma care to at least 75 per cent of the residents of that county, and provide trauma care to neighboring counties.
5. Trauma – Means a single or multisystem injury due to blunt or penetrating means or burns and which requires immediate medical intervention or treatment.
6. Trauma Service Area –The grouping of a nucleus county and its “feeder” counties into a rational service area for the care of trauma patients through a planned network of trauma center(s).

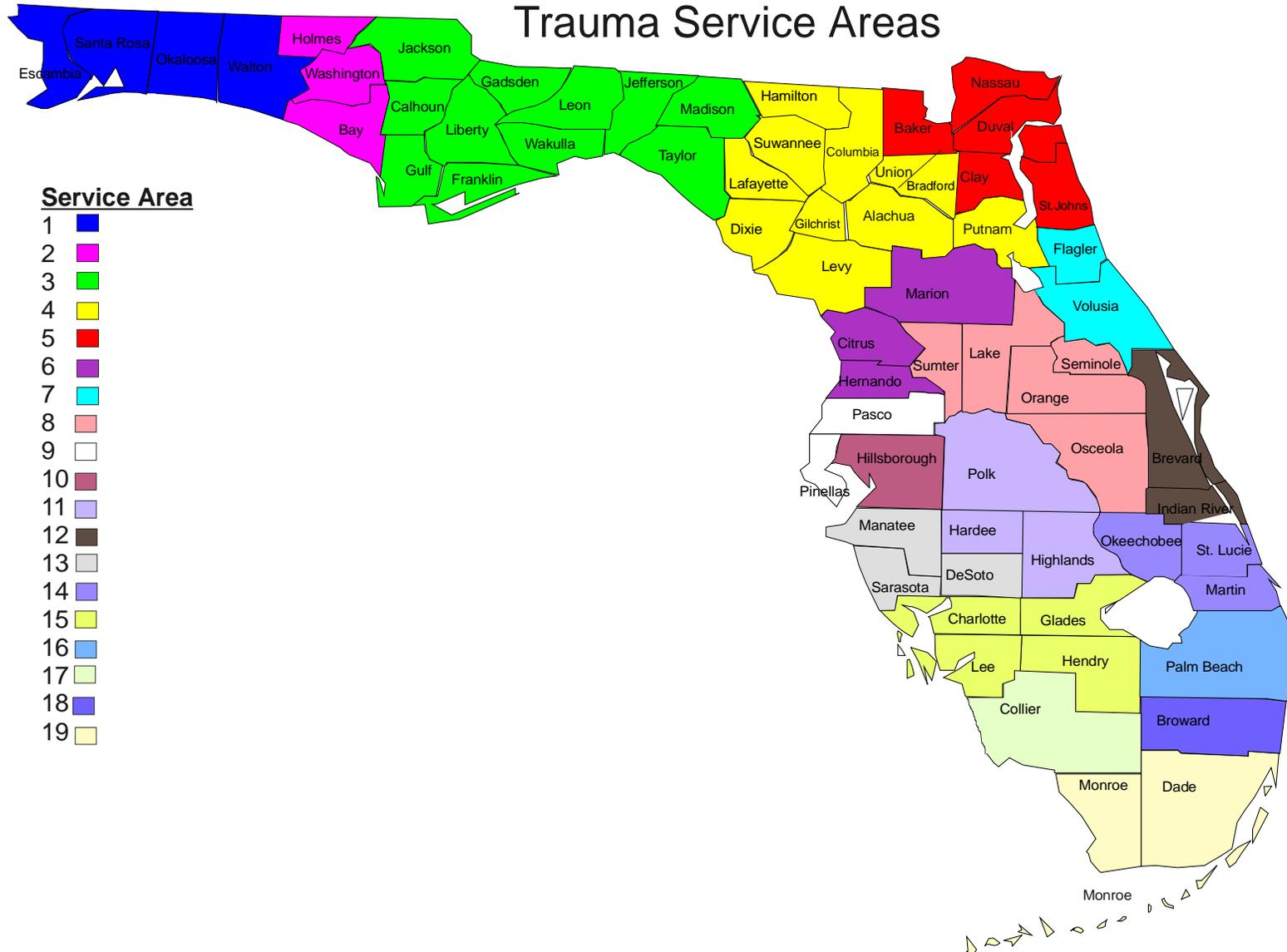
# FLORIDA - 30 MINUTE HELICOPTER SERVICE RADIUS



January 10, 2001

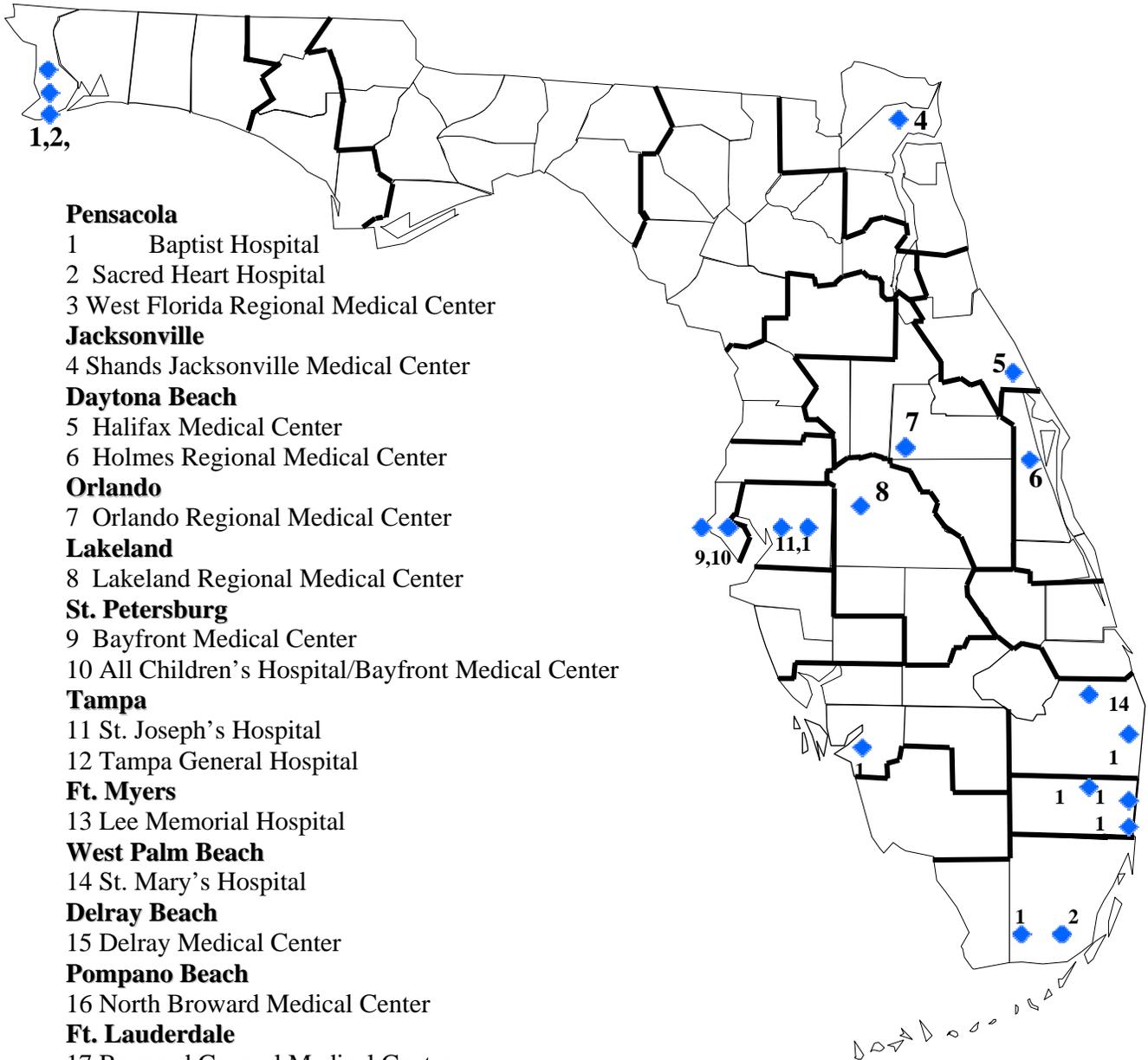
# State of Florida Trauma Service Areas

Appendix B



January 10, 2001

# Florida Trauma Center



**Pensacola**

- 1 Baptist Hospital
- 2 Sacred Heart Hospital
- 3 West Florida Regional Medical Center

**Jacksonville**

- 4 Shands Jacksonville Medical Center

**Daytona Beach**

- 5 Halifax Medical Center
- 6 Holmes Regional Medical Center

**Orlando**

- 7 Orlando Regional Medical Center

**Lakeland**

- 8 Lakeland Regional Medical Center

**St. Petersburg**

- 9 Bayfront Medical Center
- 10 All Children's Hospital/Bayfront Medical Center

**Tampa**

- 11 St. Joseph's Hospital
- 12 Tampa General Hospital

**Ft. Myers**

- 13 Lee Memorial Hospital

**West Palm Beach**

- 14 St. Mary's Hospital

**Delray Beach**

- 15 Delray Medical Center

**Pompano Beach**

- 16 North Broward Medical Center

**Ft. Lauderdale**

- 17 Broward General Medical Center

**Hollywood**

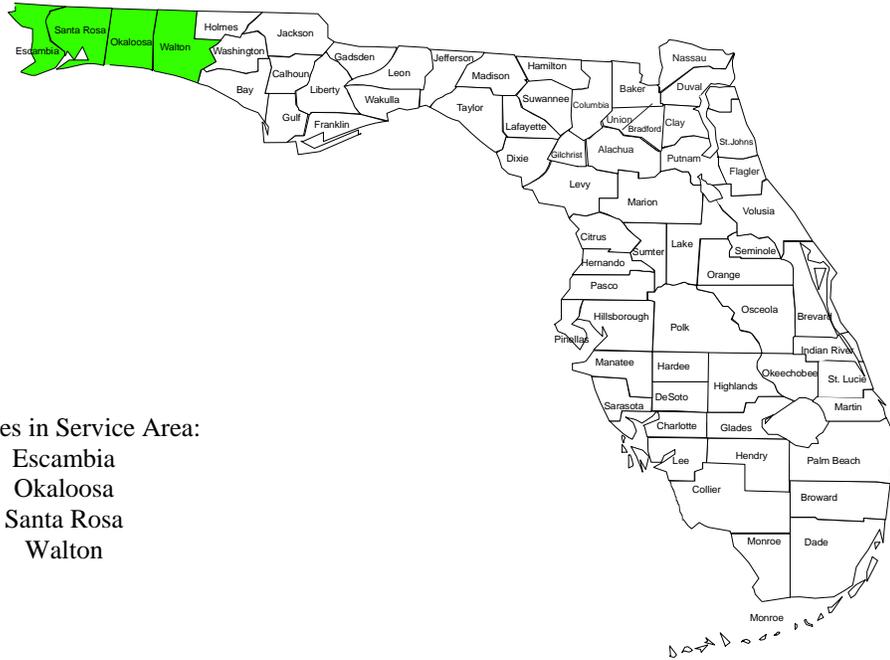
- 18 Memorial Regional Hospital

**Miami**

- 19 Jackson Memorial Hospital
- 20 Miami Children's Hospital

1/19/2000

Trauma Service Area 1



Counties in Service Area:  
 Escambia  
 Santa Rosa  
 Okaloosa  
 Walton

Service Area Population	1988	1998
0-4	40,134	42,713
5-14	76,806	86,551
15-24	89,888	87,568
25-44	173,640	189,988
45-64	102,534	132,574
65+	52,505	75,586
<b>TOTAL</b>	<b>535,509</b>	<b>614,980</b>

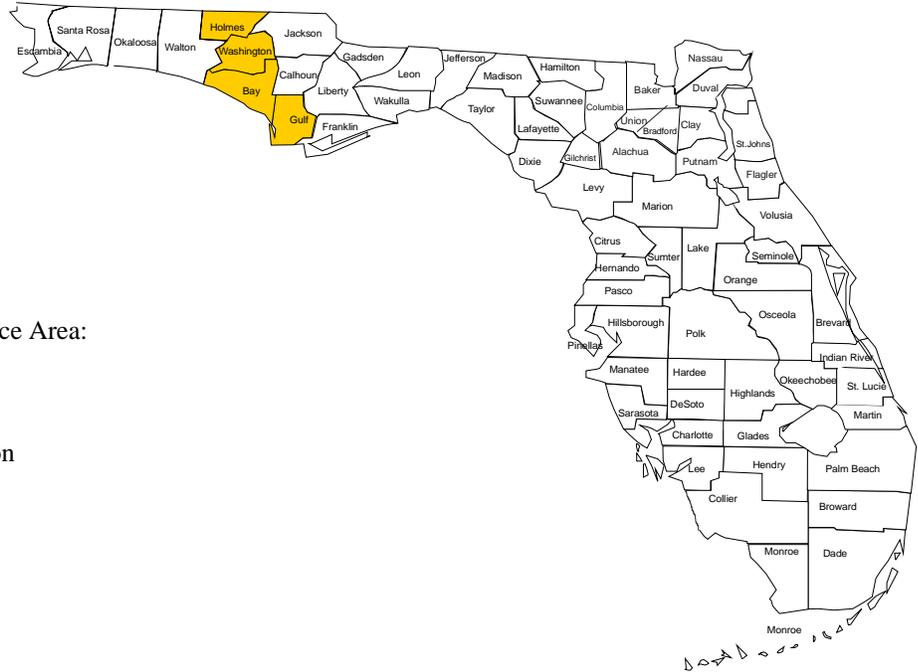
Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	3	3

Trauma Patients	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients Treated in Service Area:	2,226	1,332	275	3,558	2,484	1,311	342	4,137
Trauma Patients Residing in Service Area:	2,007	1,166	223	3,178	2,201	1,119	261	3,581
Service Area Trauma Flow:								
Flow Into Service Area	548	364	110	912	321	209	87	617
Flow Out of Service Area	345	207	59	552	38	17	6	61
Net Flow	203	157	51	360	283	192	81	556

(a) Three (3) Trauma Centers were Grandfather in for this Service Area.

Trauma Service Area 2



Counties in Service Area:

- Bay
- Gulf
- Holmes
- Washington

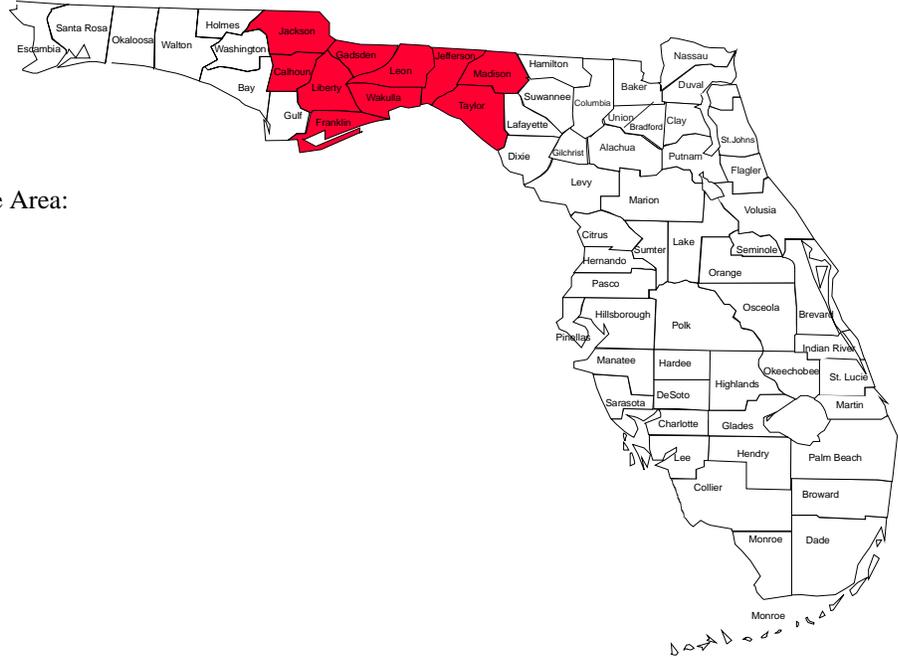
Service Area Population	1988	1998
0-4	13,263	13,079
5-14	26,400	27,874
15-24	27,760	27,017
25-44	54,012	58,778
45-64	36,830	45,848
65+	21,475	27,944
<b>TOTAL</b>	<b>179,740</b>	<b>200,540</b>

Number of trauma Centers Recommended for Service Area: 1

	1988	1998
Number of Verified Trauma Centers	0	0

Trauma Patients	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients Treated in Service Area:	850	489	117	1,339	810	391	151	1,352
Trauma Patients Residing in Service Area:	769	451	105	1,220	841	410	153	1,404
<b>Service Area Trauma Flow:</b>								
Flow Into Service Area	234	136	28	370	140	70	29	242
Flow Out of Service Area	162	107	18	269	174	89	31	294
Net Flow	72	29	10	101	-31	-19	-2	-52

**Trauma Service Area 3**



Counties in Service Area:

- Calhoun
- Franklin
- Gadsden
- Jackson
- Jefferson
- Leon
- Liberty
- Madison
- Taylor
- Wakulla

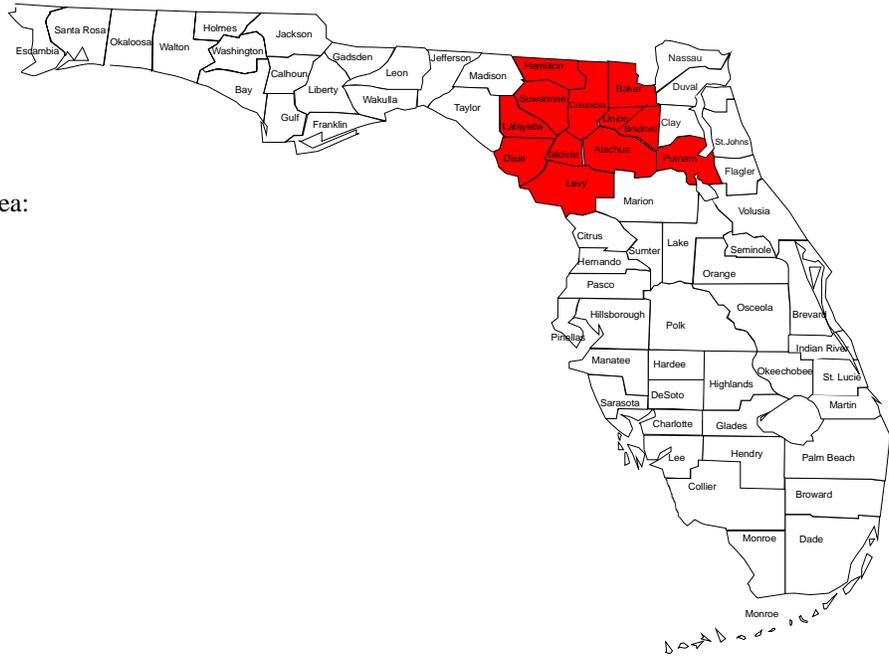
Service Area Population	1988	1998
0-4	23,270	27,543
5-14	45,692	54,978
15-24	66,290	88,510
25-44	95,999	130,794
45-64	51,895	90,667
65+	32,026	45,548
<b>TOTAL</b>	<b>315,172</b>	<b>438,040</b>

Number of trauma Centers Recommended for Service Area: 1

	1988	1998
Number of Verified Trauma Centers	0	0

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	1,213	815	182	2,028	1,269	736	201	2,206
Trauma Patients Residing in Service Area:	1,114	701	152	1815	1,235	702	176	2,113
Service Area Trauma Flow:								
Flow Into Service Area	452	409	106	861	160	82	46	288
Flow Out of Service Area	372	312	106	684	126	48	21	195
Net Flow	80	97	24	177	34	34	25	93

**Trauma Service Area 4**



Counties in Service Area:

- Alachua
- Bradford
- Columbia
- Dixie
- Gilchrist
- Lafayette
- Levy
- Putnam
- Suwannee
- Union

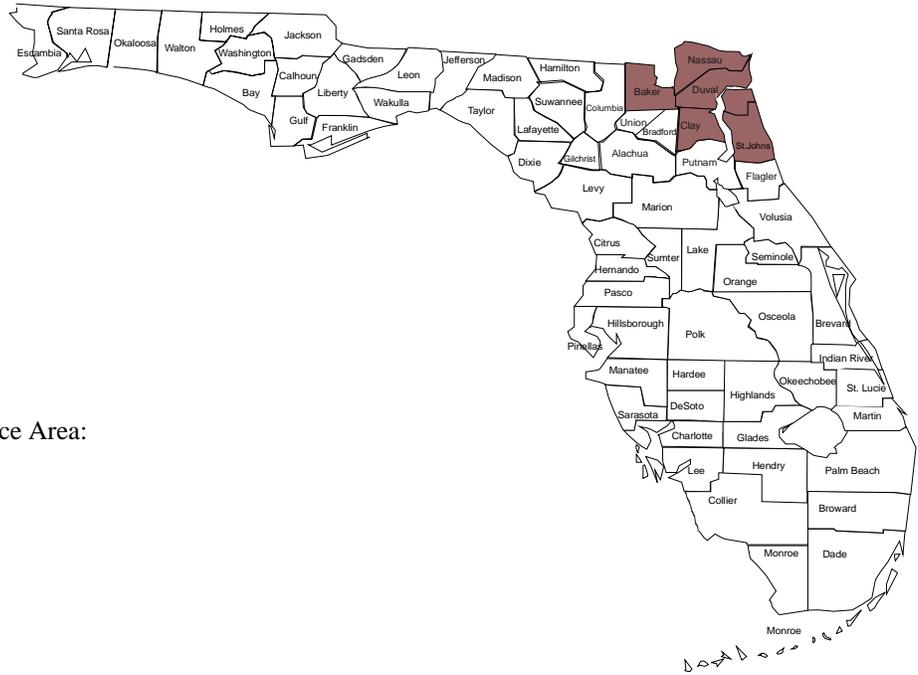
Service Area Population	1988	1998
0-4	29,255	30,672
5-14	56,012	62,664
15-24	81,441	92,675
25-44	121,638	140,989
45-64	70,772	99,604
65+	46,882	66,037
<b>TOTAL</b>	<b>406,000</b>	<b>492,641</b>

Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	0	0

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	2,051	1,206	269	3	3,257	1,087	333	3,504
Trauma Patients Residing in Service Area:	1,802	1,087	229	2,860	1,726	947	259	2,932
Service Area Trauma Flow:								
Flow Into Service Area	948	621	155	1,569	599	259	136	994
Flow Out of Service Area	754	499	155	1,253	241	119	62	422
Net Flow	194	122	27	316	358	140	74	572

Trauma Service Area 5



Counties in Service Area:

- Baker
- Clay
- Duval
- Nassau
- St. Johns

Service Area Population	1988	1998
0-4	77,570	79,148
5-14	133,788	154,528
15-24	141,627	145,925
25-44	302,086	334,279
45-64	172,439	232,762
65+	99,932	124,292
<b>TOTAL</b>	<b>927,442</b>	<b>1,070,934</b>

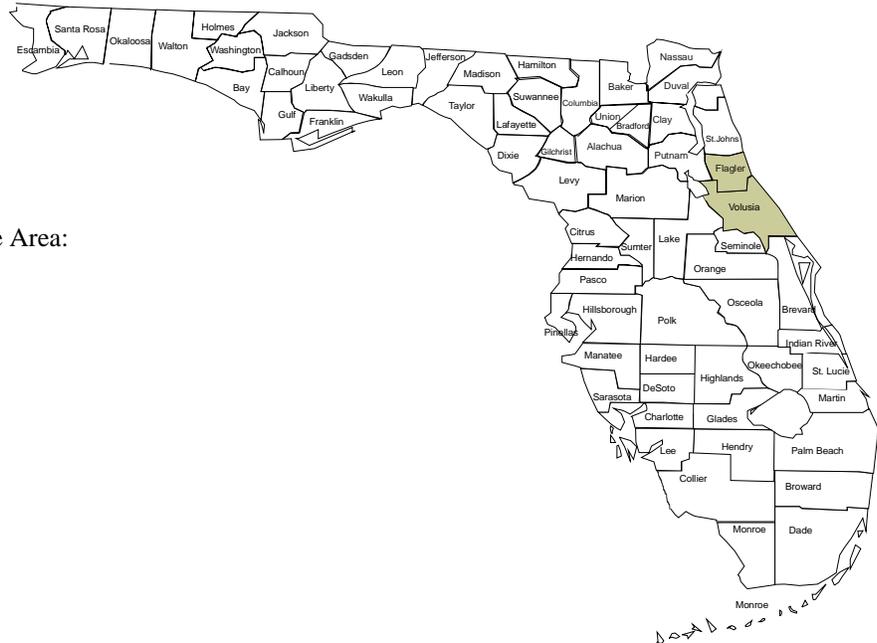
Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	1	1

	1988				1998			Total
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	
Trauma Patients								
Trauma Patients Treated in Service Area:	5,372	2,868	662	9,240	4,439	2,174	587	7,200
Trauma Patients Residing in Service Area:	4,997	2,566	546	7,569	4,081	2,007	500	6,588
Service Area Trauma Flow:								
Flow Into Service Area	1,042	668	192	1,710	525	253	120	890
Flow Out of Service Area	747	431	111	1,178	167	86	33	286
Net Flow	295	237	81	532	358	167	87	612



**Trauma Service Area 7**



Counties in Service Area:  
 Flagler  
 Volusia

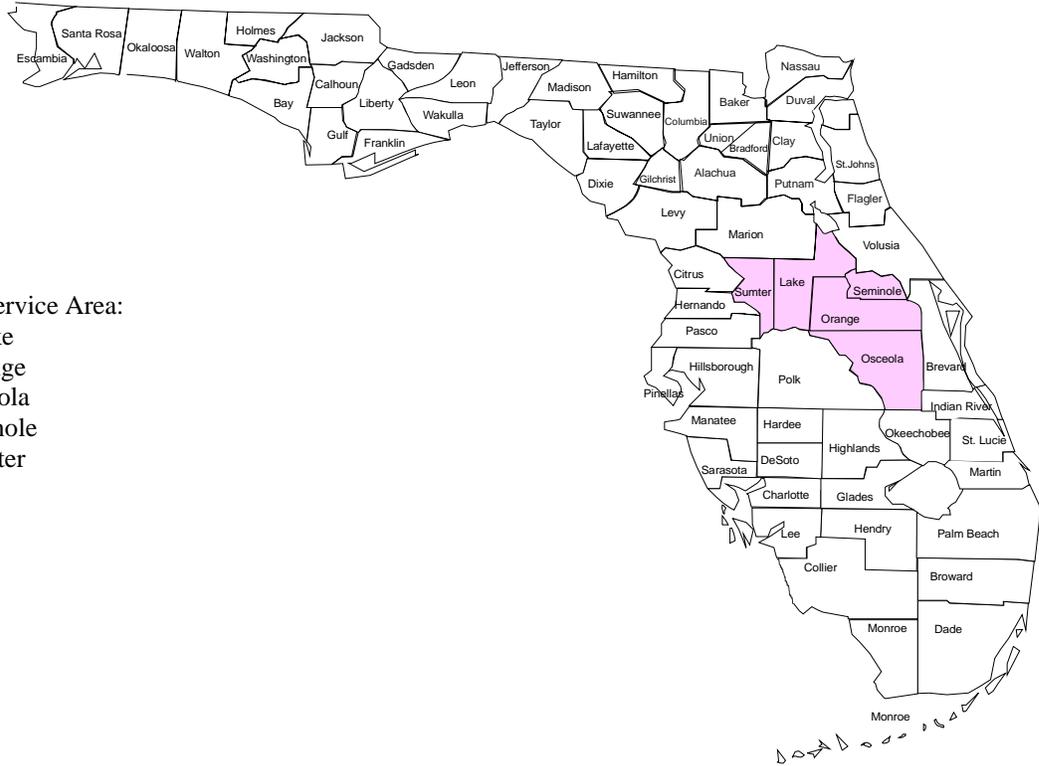
Service Area Population	1988	1998
0-4	21,078	24,377
5-14	40,260	53,334
15-24	47,790	52,305
25-44	96,825	118,378
45-64	80,441	111,125
65+	84,586	107,759
<b>TOTAL</b>	<b>370,980</b>	<b>467,278</b>

Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	1	1

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients Treated in Service Area:	1,761	1,376	225	3,137	2,241	1,413	244	3,898
Trauma Patients Residing in Service Area:	1,727	1,286	190	3,013	2,310	1,411	259	3,980
Service Area Trauma Flow:								
Flow Into Service Area	252	232	64	484	203	124	46	373
Flow Out of Service Area	265	188	36	453	272	122	61	455
Net Flow	-13	44	28	31	-69	2	-15	-82

Trauma Service Area 8



Counties in Service Area:

- Lake
- Orange
- Osceola
- Seminole
- Sumter

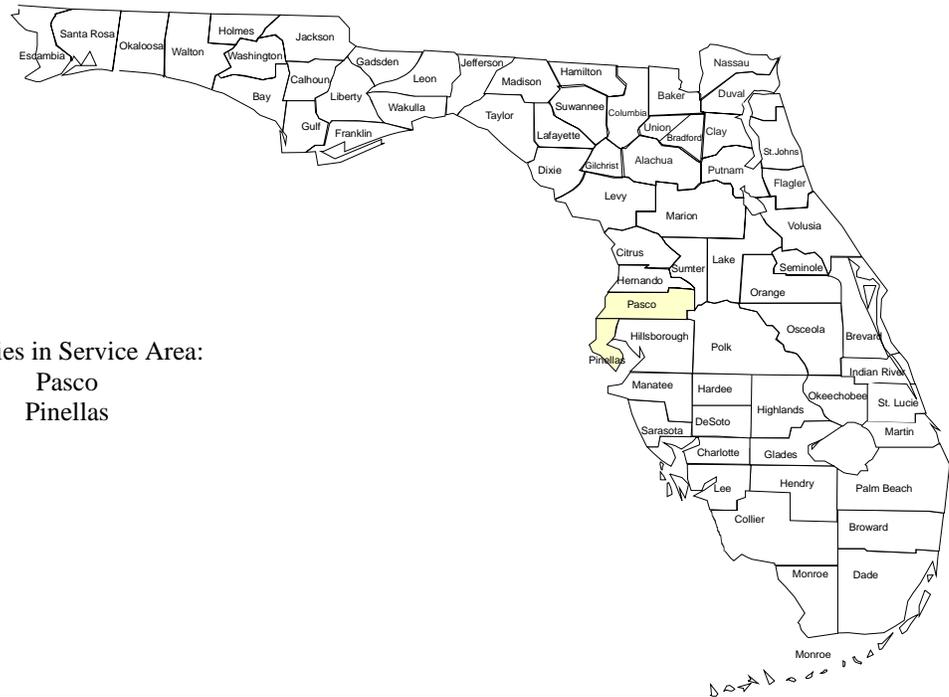
Service Area Population	1988	1998
0-4	83,945	104,507
5-14	156,213	209,400
15-24	177,835	206,762
25-44	353,939	485,173
45-64	236,310	345,838
65+	158,525	213,945
TOTAL	1,166,767	1,565,625

Number of trauma Centers Recommended for Service Area: 3

	1988	1998
Number of Verified Trauma Centers	1	1

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	5,534	3,756	698	9,290	5,915	3,511	1,049	10,478
Trauma Patients Residing in Service Area:	4,998	3,329	592	8,327	5,296	3,131	849	9,276
Service Area Trauma Flow:								
Flow Into Service Area	1,591	1,137	287	2,728	919	542	263	1,724
Flow Out of Service Area	1,164	799	208	1,963	297	162	63	522
Net Flow	427	338	79	765	622	380	200	1,202

**Trauma Service Area 9**



Counties in Service Area:  
Pasco  
Pinellas

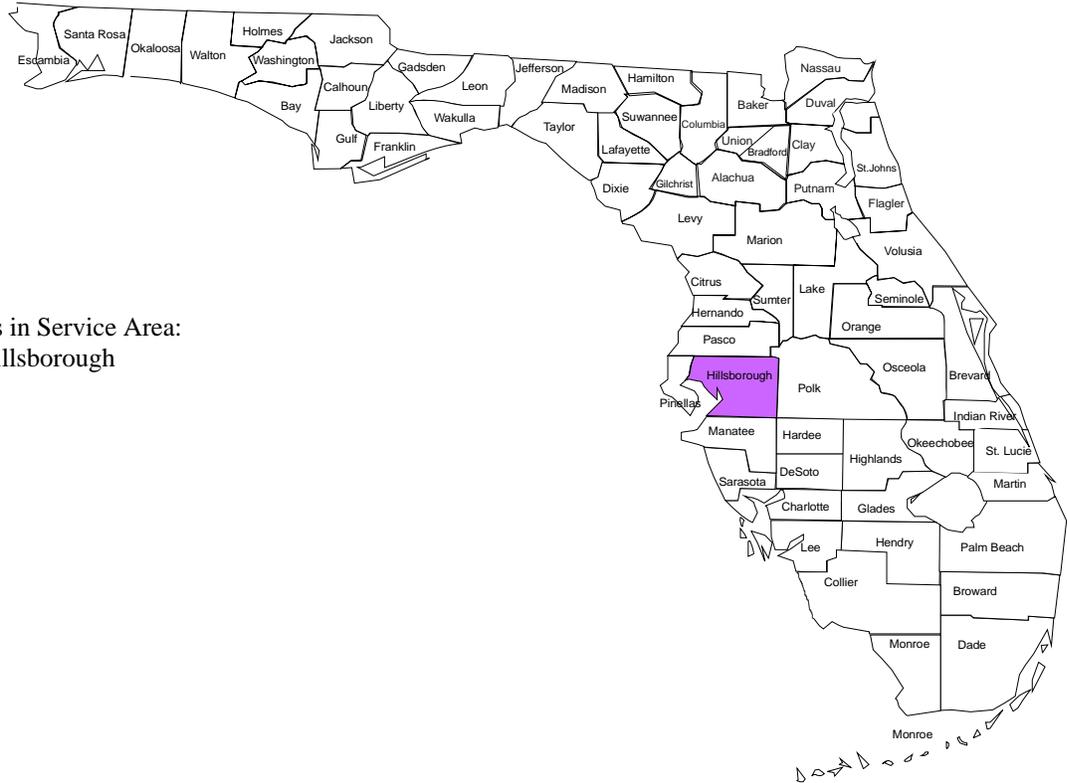
Service Area Population	1988	1998
0-4	57,420	59,782
5-14	105,930	128,306
15-24	117,077	115,482
25-44	268,837	300,372
45-64	252,085	292,943
65+	308,019	322,716
<b>TOTAL</b>	<b>1,109,367</b>	<b>1,219,601</b>

Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	1	2

Trauma Patients	1988				1998			Total
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	
Trauma Patients Treated in Service Area:	4,880	3,978	626	8,858	7,177	4,717	823	12,717
Trauma Patients Residing in Service Area:	4,645	3,709	552	8,354	6,901	4,558	770	12,229
Service Area Trauma Flow:								
Flow Into Service Area	536	406	124	942	729	412	175	1,316
Flow Out of Service Area	524	366	107	890	453	253	122	828
Net Flow	12	40	17	52	276	159	53	488

**Trauma Service Area 10**



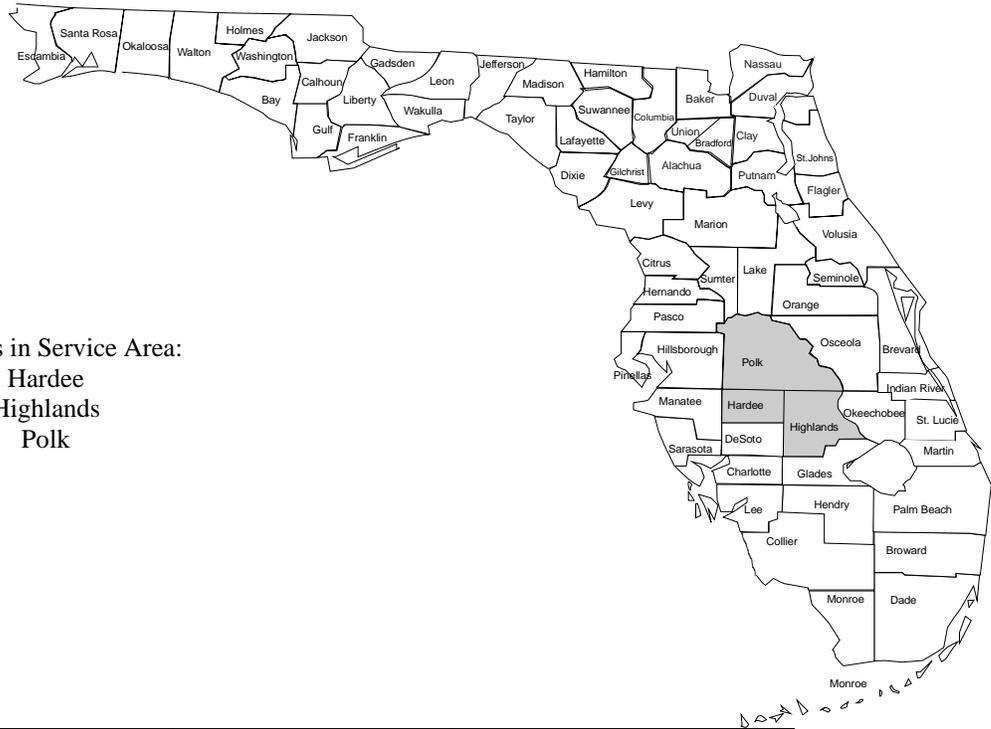
Counties in Service Area:  
Hillsborough

Service Area Population	1988	1998
0-4	63,768	65,873
5-14	111,244	131,801
15-24	130,739	120,742
25-44	265,782	291,089
45-64	159,502	211,808
65+	100,452	125,015
<b>TOTAL</b>	<b>831,487</b>	<b>946,328</b>

Number of trauma Centers Recommended for Service Area: 3

	1988	1998
Number of Verified Trauma Centers	3	2

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	4,055	2,458	604	6,513	4,147	2,561	838	7,546
Trauma Patients Residing in Service Area:	3,753	2,222	507	5,975	3,543	2,120	576	6,239
Service Area Trauma Flow:								
Flow Into Service Area	590	425	136	1,015	829	549	311	1,689
Flow Out of Service Area	387	259	53	646	225	108	49	382
Net Flow	203	166	83	369	604	441	262	1,308



Counties in Service Area:  
 Hardee  
 Highlands  
 Polk

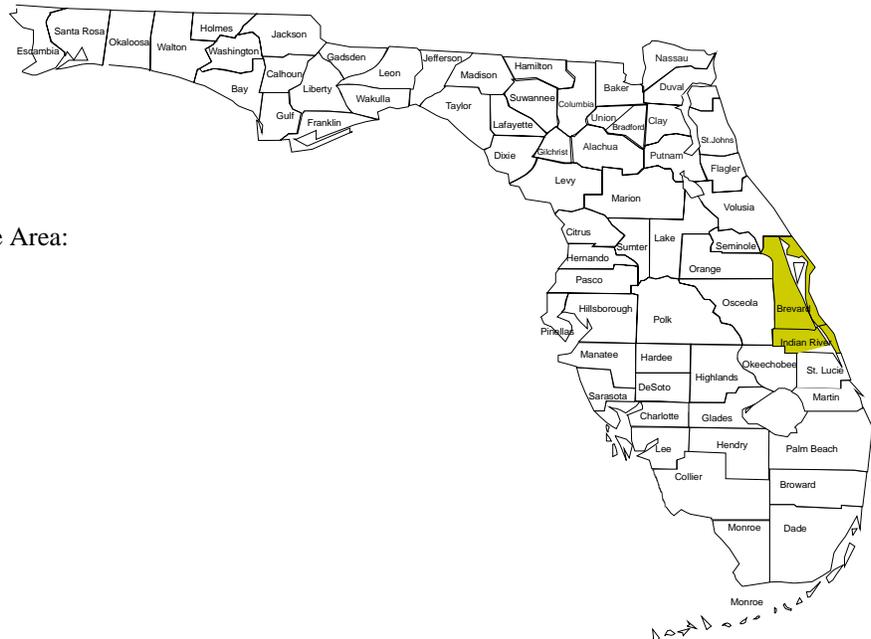
Service Area Population	1988	1998
0-4	34,477	35,567
5-14	64,058	71,379
15-24	69,019	65,584
25-44	140,174	138,954
45-64	99,996	129,719
65+	84,488	130,580
<b>TOTAL</b>	<b>492,212</b>	<b>571,783</b>

Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	0	1

	1988				1998			Total
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	
Trauma Patients								
Trauma Patients Treated in Service Area:	2,694	1,859	314	4,553	2,270	1,485	281	4,036
Trauma Patients Residing in Service Area:	2,497	1,665	290	4,162	2,537	1,577	358	4,472
Service Area Trauma Flow:								
Flow Into Service Area	504	381	83	885	133	117	38	288
Flow Out of Service Area	367	229	63	596	400	209	115	724
Net Flow	137	152	20	289	-267	-92	-77	-436

Trauma Service Area 12



Counties in Service Area:  
Brevard  
Indian River

Service Area Population	1988	1998
0-4	30,683	31,522
5-14	55,997	72,261
15-24	65,003	63,543
25-44	134,095	156,675
45-64	112,992	136,402
65+	80,960	117,247
TOTAL	479,730	577,650

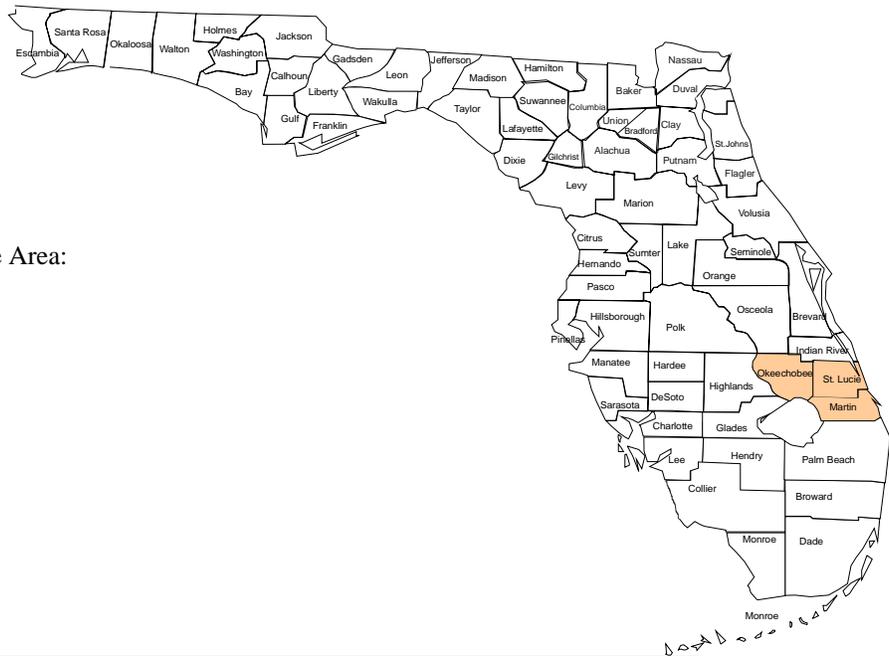
Number of trauma Centers Recommended for Service Area: 3

	1988	1998
Number of Verified Trauma Centers	0	1

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	2,550	1,487	220	4,037	2,227	1,616	271	4,111
Trauma Patients Residing in Service Area:	2,390	1,433	218	3,823	2,205	1,568	290	4,063
Service Area Trauma Flow:								
Flow Into Service Area	227	165	37	392	196	142	48	386
Flow Out of Service Area	143	148	43	291	177	94	67	338
Net Flow	84	17	-6	101	19	48	-19	48



Trauma Service Area 14



Counties in Service Area:  
 Martin  
 Okeechobee  
 St. Lucie

Service Area Population	1988	1998
0-4	18,123	18,810
5-14	32,621	40,735
15-24	32,623	35,165
25-44	69,266	84,810
45-64	53,831	80,471
65+	52,533	81,108
TOTAL	258,997	341,099

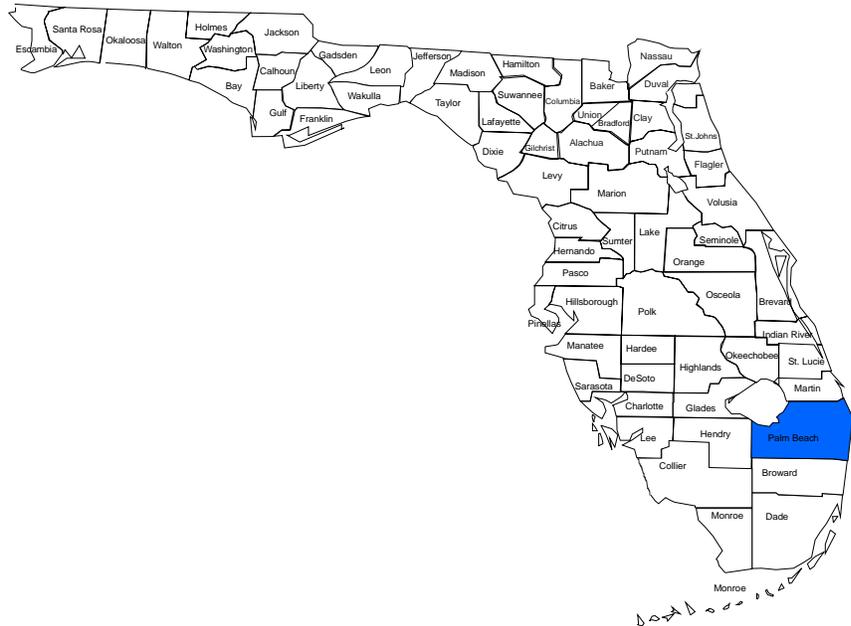
Number of trauma Centers Recommended for Service Area: 1

	1988	1998
Number of Verified Trauma Centers	0	0

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	949	687	105	1,636	1,651	900	166	2,717
Trauma Patients Residing in Service Area:	943	698	102	1,641	1,746	947	206	2,899
Service Area Trauma Flow:								
Flow Into Service Area	172	121	27	293	145	82	22	249
Flow Out of Service Area	211	152	27	363	240	129	62	431
Net Flow	-39	-31	0	-70	-95	-47	-40	-182



Trauma Service Area 16



Counties in Service Area:  
Palm Beach

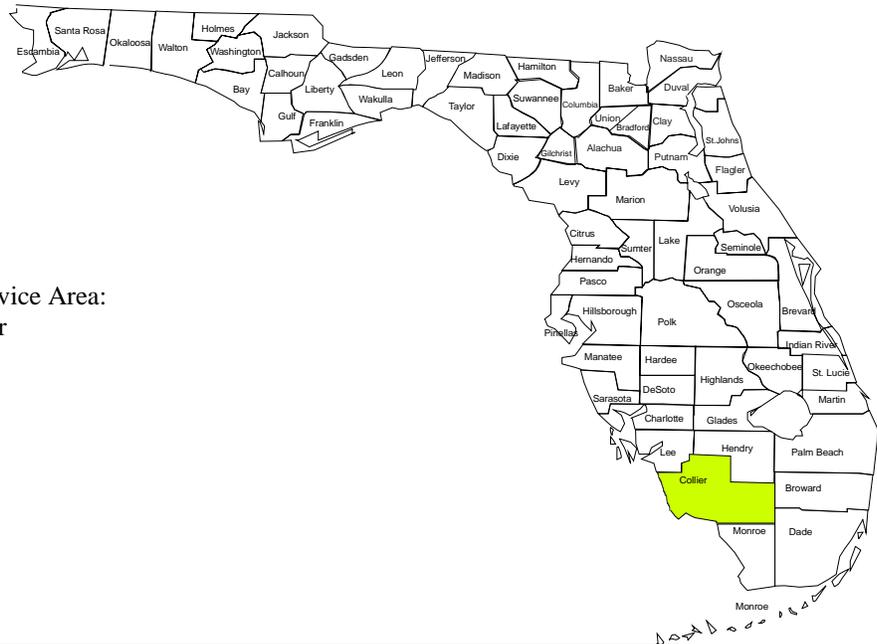
Service Area Population	1988	1998
0-4	55,074	59,884
5-14	90,173	121,341
15-24	92,161	99,623
25-44	227,017	271,662
45-64	178,609	237,590
65+	196,627	241,065
TOTAL	839,661	1,031,165

Number of trauma Centers Recommended for Service Area: 2

	1988	1998
Number of Verified Trauma Centers	0	2

	1988				1998			Total
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	
Trauma Patients								
Trauma Patients Treated in Service Area:	3,337	2,310	365	5,647	5,514	3,700	752	9,966
Trauma Patients Residing in Service Area:	3,312	2,233	371	5,545	5,198	3,510	698	9,406
Service Area Trauma Flow:								
Flow Into Service Area	287	245	47	532	608	355	109	1,072
Flow Out of Service Area	298	188	57	486	292	165	55	512
Net Flow	-11	57	-10	46	316	190	54	560

Trauma Service Area 17



Counties in Service Area:  
Collier

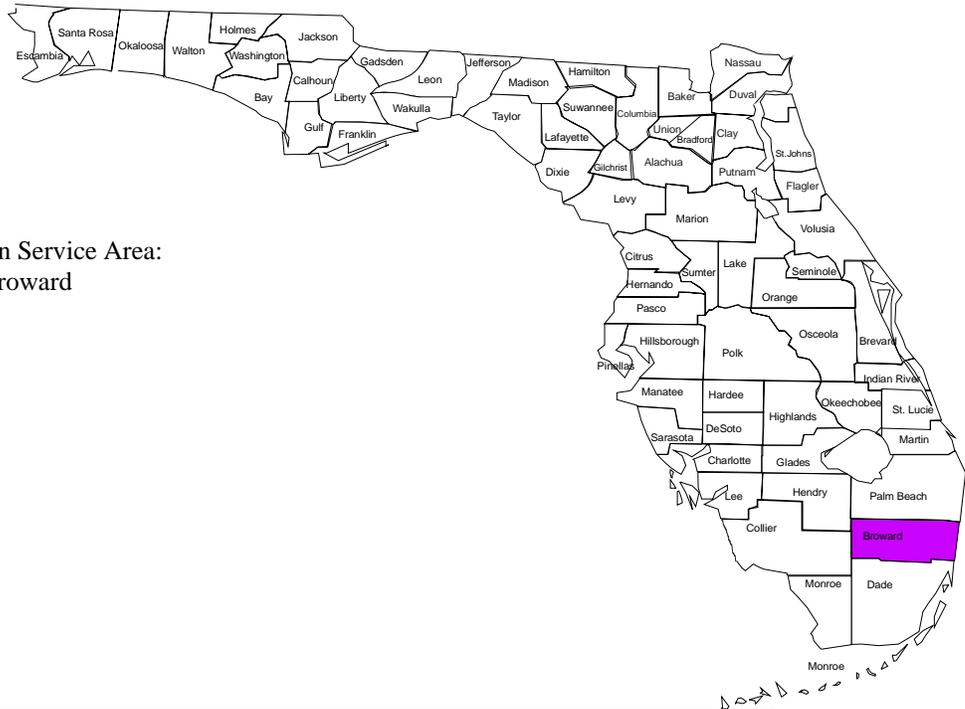
Service Area Population	1988	1998
0-4	9,288	12,005
5-14	15,454	23,965
15-24	14,780	19,533
25-44	35,711	51,302
45-64	31,790	51,730
65+	28,908	50,441
TOTAL	135,931	208,976

Number of trauma Centers Recommended for Service Area: 1

	1988	1998
Number of Verified Trauma Centers	0	0

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients								
Trauma Patients Treated in Service Area:	656	475	73	1,131	956	585	103	1,644
Trauma Patients Residing in Service Area:	612	436	75	1,048	849	508	114	1,471
Service Area Trauma Flow:								
Flow Into Service Area	90	78	11	168	233	149	31	413
Flow Out of Service Area	49	47	16	96	126	72	42	240
Net Flow	41	31	-5	72	107	77	-11	173

Trauma Service Area 18



Counties in Service Area:  
Broward

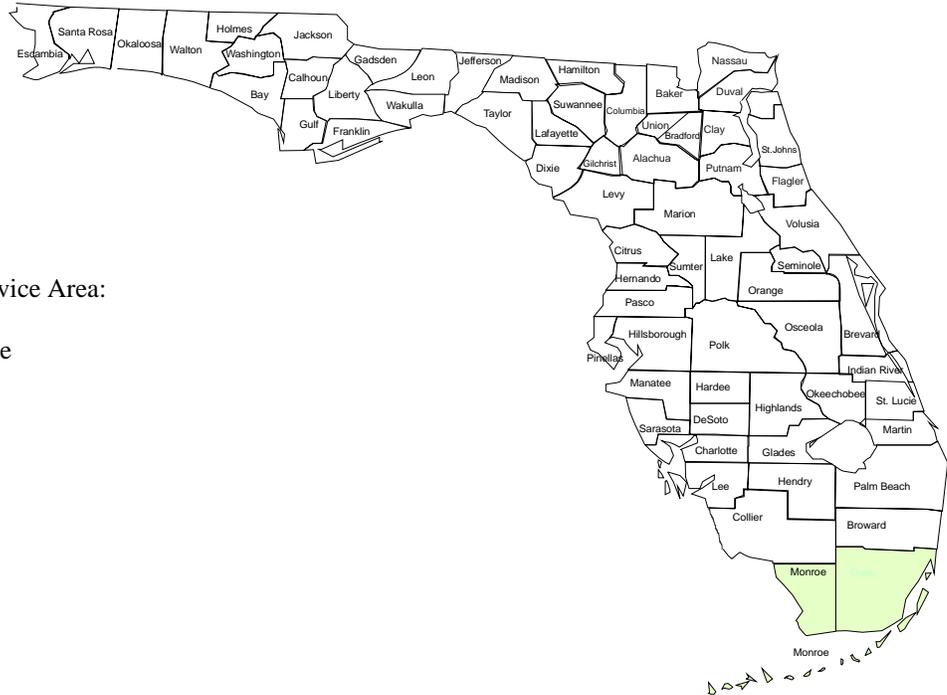
Service Area Population	1988	1998
0-4	75,282	92,271
5-14	127,625	185,439
15-24	140,344	147,718
25-44	361,597	424,637
45-64	253,306	329,420
65+	261,209	272,847
TOTAL	1,219,363	1,452,332

Number of trauma Centers Recommended for Service Area: 4

Number of Verified Trauma Centers      1988      1998  
    0                    3

	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients Treated in Service Area:	6,880	4,238	670	11,118	7,443	4,769	875	13,087
Trauma Patients Residing in Service Area:	6,705	4,204	652	10,909	7,495	4,791	840	13,126
Service Area Trauma Flow:								
Flow Into Service Area	665	417	91	1,082	721	407	118	1,246
Flow Out of Service Area	618	455	93	1,073	773	435	83	1,291
Net Flow	47	-38	-2	9	-52	-28	35	45

**Trauma Service Area 19**



Counties in Service Area:  
 Dade  
 Monroe

Service Area Population	1988	1998
0-4	146,935	159,405
5-14	239,018	316,488
15-24	255,928	275,820
25-44	596,645	638,802
45-64	403,255	497,884
65+	280,760	298,918
<b>TOTAL</b>	<b>1,922,541</b>	<b>2,187,317</b>

Number of trauma Centers Recommended for Service Area: 6

	1988	1998
Number of Verified Trauma Centers	2	2

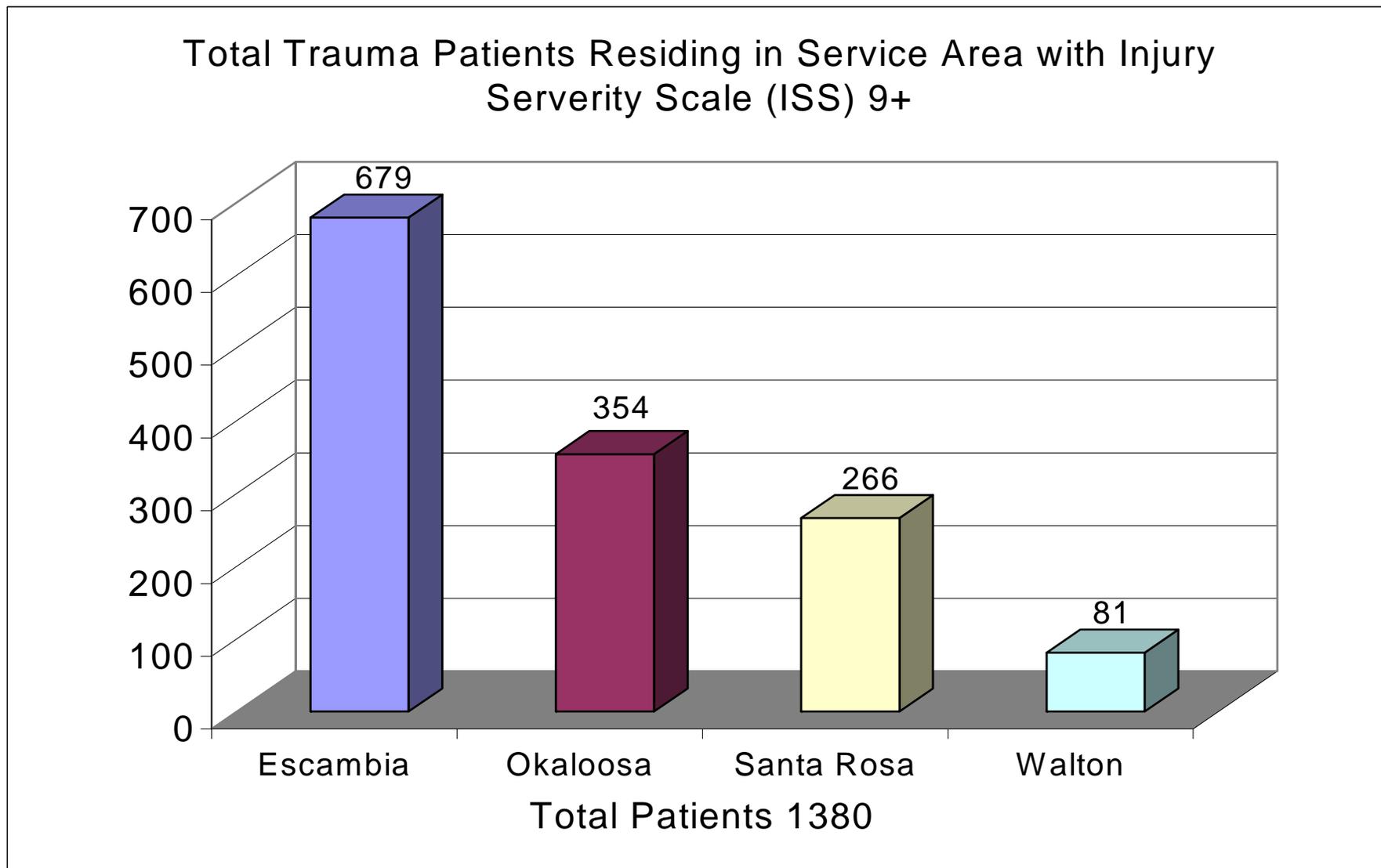
Trauma Patients	1988				1998			
	ISS 1-8	ISS 9+	ISS 16+	Total	ISS 1-8	ISS 9+	ISS 16+	Total
Trauma Patients Treated in Service Area:	11,681	7,346	1,370	19,027	11,272	5,962	1,471	18,705
Trauma Patients Residing in Service Area:	10,822	6,633	1,176	17,455	10,506	5,522	1,346	17,374
Service Area Trauma Flow:								
Flow Into Service Area	984	694	149	1,678	1,122	640	195	1,957
Flow Out of Service Area	491	280	77	771	356	200	70	656
Net Flow	493	414	72	907	766	440	125	1,331

### Analysis of Rate of Retention of Trauma Patients by County

	ISS Total Residents <u>Trauma</u> <u>ISS 9+</u>	No. Retained in County <u>ISS 9+</u>	Percent Treated in <u>County</u>		ISS Total Residents <u>Trauma</u> <u>ISS 9+</u>	No. Retained in County <u>ISS 9+</u>	Percent Treated in <u>County</u>
Alachua	473	450	95%	Lake	751	511	68%
Baker	59	1	2%	Lee	1415	1292	91%
Bay	388	368	95%	Leon	411	392	95%
Bradford	74	3	4%	Levy	121	2	2%
Brevard	1381	1221	88%	Liberty	19	0	0%
Broward	5631	5119	91%	Madison	29	3	10%
Calhoun	32	2	6%	Manatee	922	736	80%
Charlotte	536	430	80%	Marion	742	620	84%
Citrus	477	371	78%	Martin	458	387	84%
Clay	251	149	59%	Monroe	262	194	74%
Collier	622	508	82%	Nassau	118	36	31%
Columbia	138	55	40%	Okaloosa	354	292	82%
Dade	6606	6339	96%	Okeechobee	152	90	59%
DeSoto	86	25	29%	Orange	2016	1699	84%
Dixie	36	0	0%	Osceola	410	250	61%
Duval	1803	1672	93%	Palm Beach	4208	3988	95%
Escambia	679	658	97%	Pasco	1406	948	67%
Flagler	151	87	58%	Pinellas	3922	3751	96%
Franklin	24	3	13%	Polk	1471	1267	86%
Gadsden	108	0	0%	Putnam	215	103	48%
Gilchrist	30	0	0%	St. Johns	276	131	47%
Glades	9	0	0%	St. Lucie	543	413	76%
Gulf	33	3	9%	Santa Rosa	266	128	48%
Hamilton	23	3	13%	Sarasota	1551	1388	89%
Hardee	72	6	8%	Seminole	665	361	54%
Hendry	68	14	21%	Sumter	138	0	0%
Hernando	507	380	75%	Suwannee	119	6	5%
Highlands	392	277	71%	Taylor	53	11	21%
Hillsborough	2696	2539	94%	Union	34	1	3%
Holmes	35	7	20%	Volusia	1519	1361	90%
Indian River	477	404	85%	Wakulla	50	0	0%
Jackson	123	100	81%	Walton	81	14	17%
Jefferson	29	0	0%				

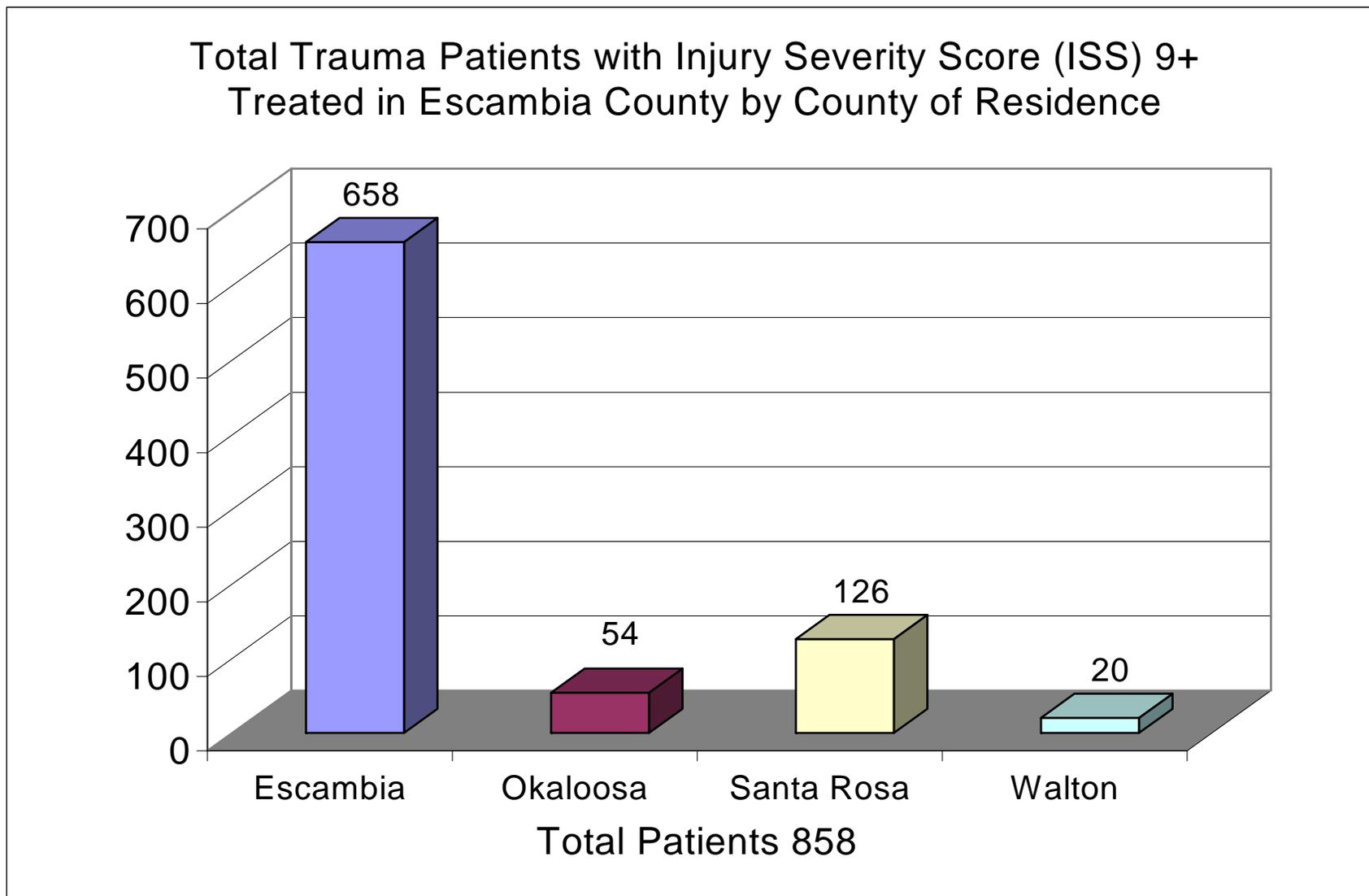
- Notes:
1. Counties with 90% retention of their trauma patients for trauma care have highest potential to be a nucleus county.
  2. Counties with 75% retention of their trauma patients for trauma care should be considered as a nucleus county.
  3. Counties with less than 75% retention of trauma patients for trauma care should be considered as "feeder" counties.

### Trauma Service Area 1



Note: See Table 1-3 for supporting data.

### Trauma Service Area 1

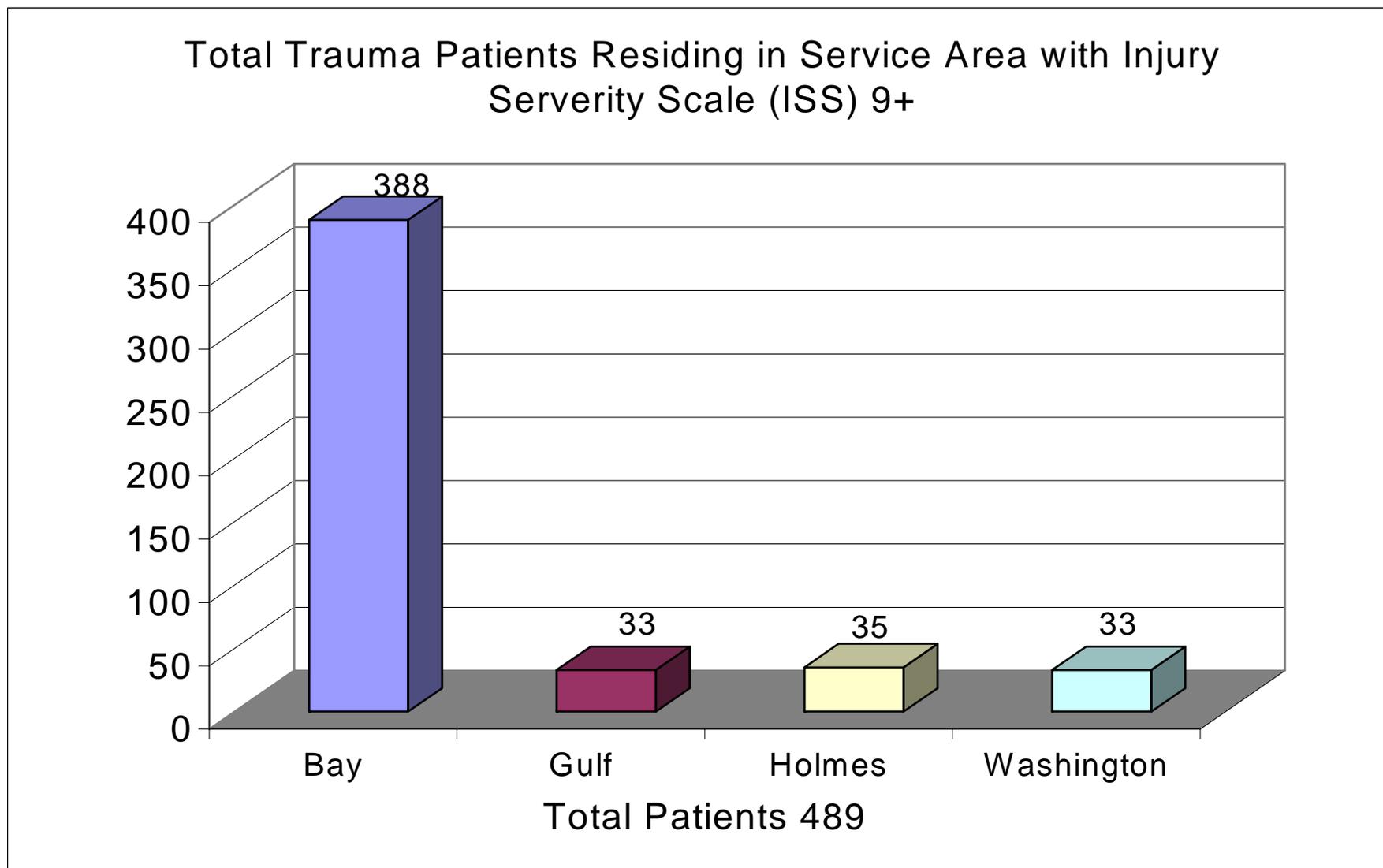


Note: See Table 1-3 for supporting data.

**Service Area 1**  
Nucleus County: Escambia

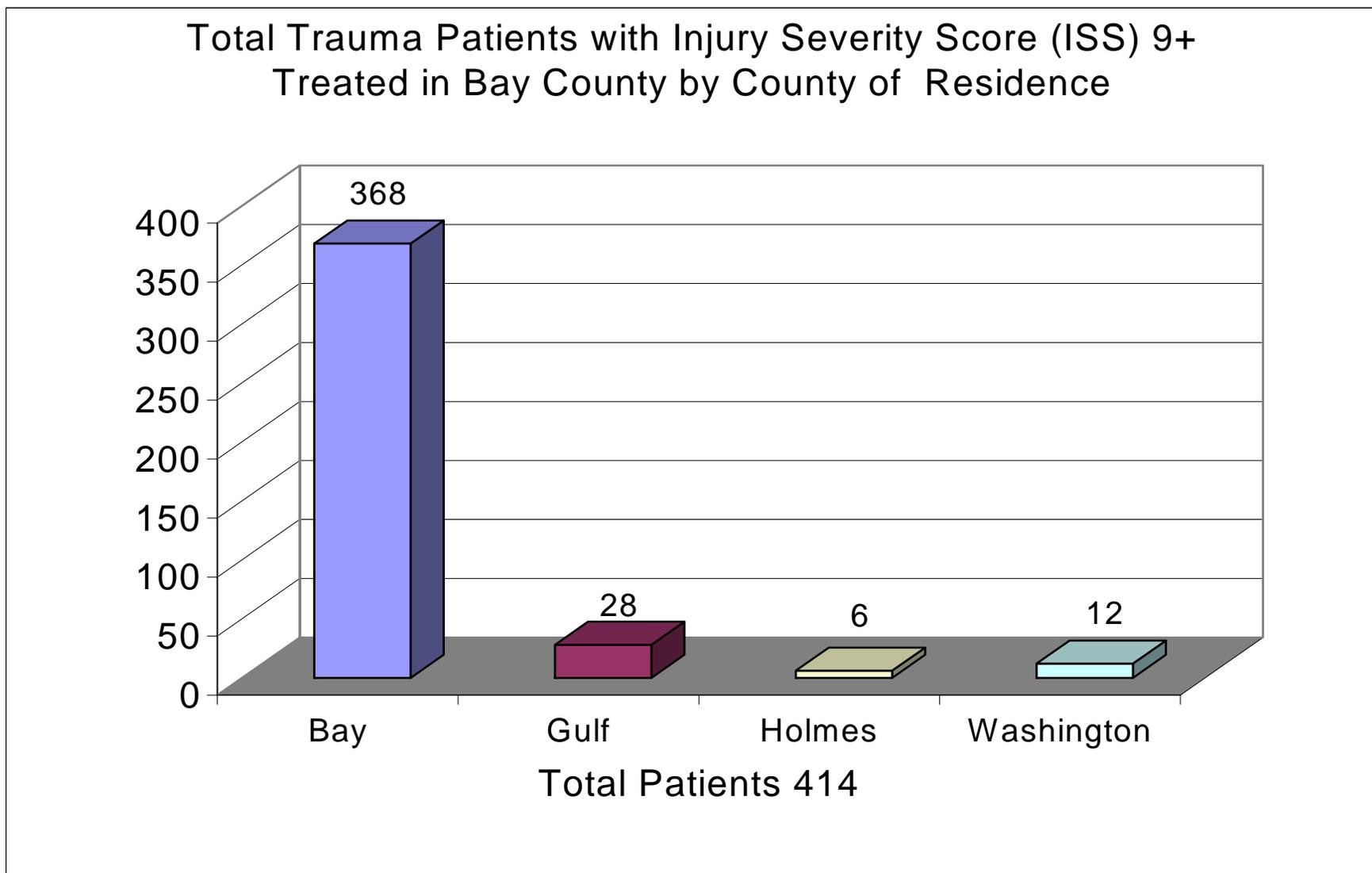
<b>Counties Sending to Nucleus County</b>				
Residence	<b>Escambia</b>	<b>Okaloosa</b>	<b>Santa Rosa</b>	<b>Walton</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	679	354	266	81
Total Trauma Patients with Injury Severity Score (ISS) 9+ treated in Escambia	658	54	126	20
Percent Residents Treated in Escambia	97%	15%	47%	25%
Counties Treating Significant Percentage of Residents of Counties Listed Above				
<b>Okaloosa</b>				
Total		292		41
Percentage of Total Served		82%		51%
<b>Santa Rosa</b>				
Total			128	
Percentage of Total Served			48%	
<b>Walton</b>				
Total				14
Percentage of Total Served				17%

### Trauma Service Area 2



Note: See Table 2-3 for supporting data.

### Trauma Service Area 2



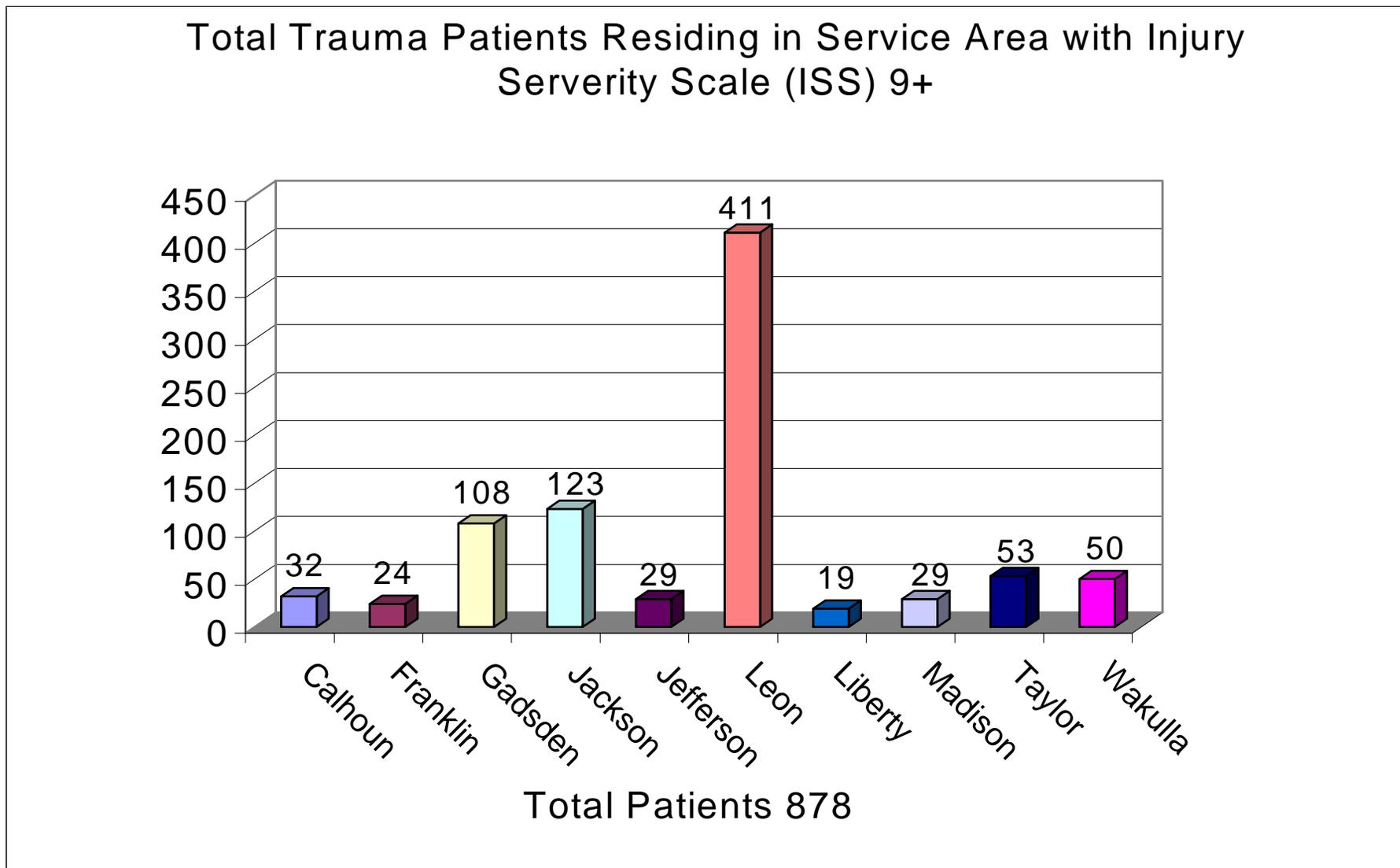
Note: See Table 2-3 for supporting data.

**Service Area 2**

Nucleus County: Bay

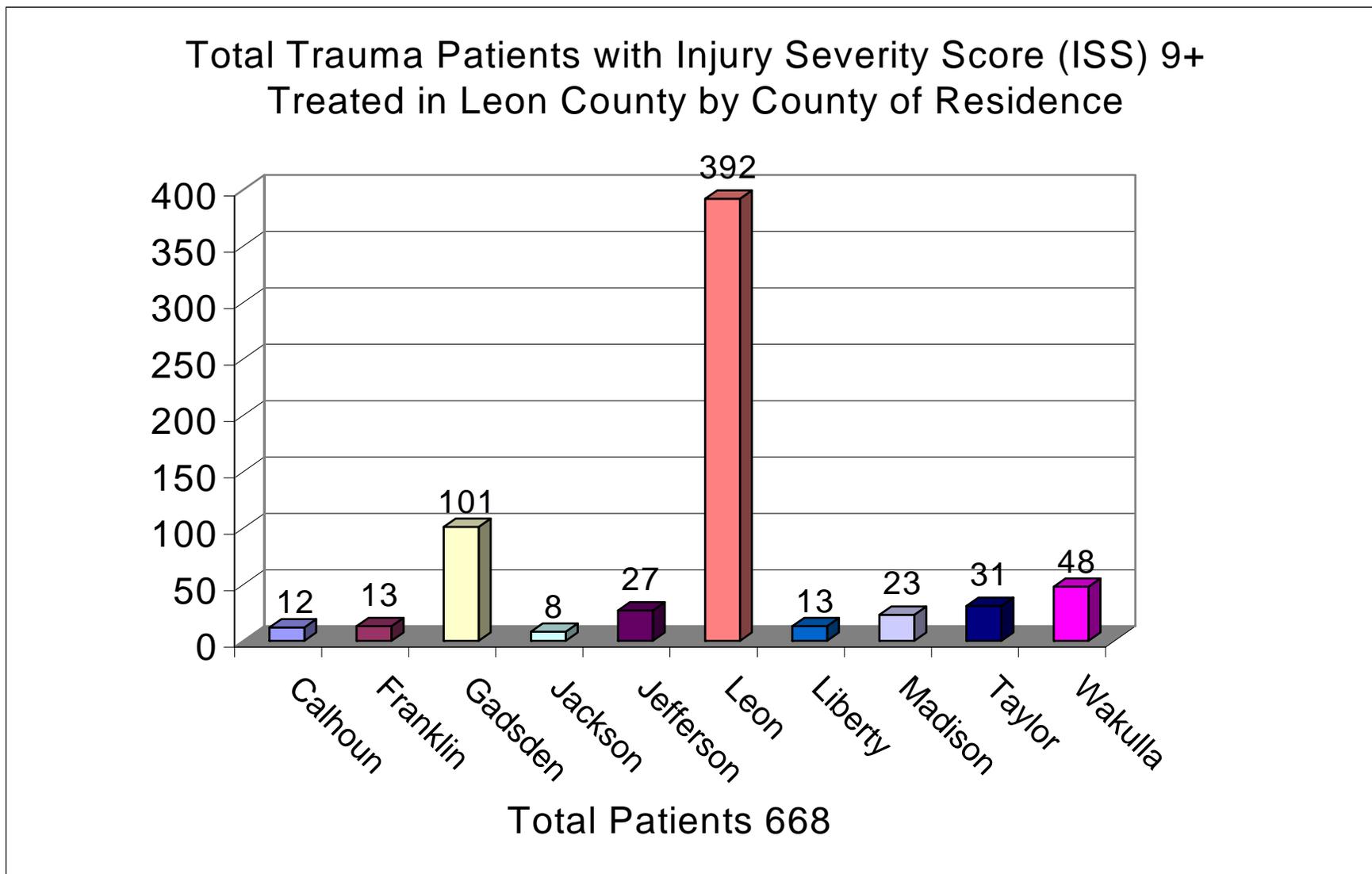
<b>Counties Sending to Nucleus County</b>				
Residence	<b>Bay</b>	<b>Gulf</b>	<b>Holmes</b>	<b>Washington</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	388	33	35	33
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Bay	368	28	6	12
Percent Residents Treated in Bay	95%	85%	17%	36%
Counties Treating Significant Percentage of Residents of Counties Listed Above				
<b>Okaloosa</b>				
Total			10	
Percentage of Total Served			29%	
<b>Holmes</b>				
Total			7	
Percentage of Total Served			20%	
<b>Washington</b>				
Total				14
Percentage of Total Served				42%

### Trauma Service Area 3



Note: See Table 3-3 for supporting data.

### Trauma Service Area 3

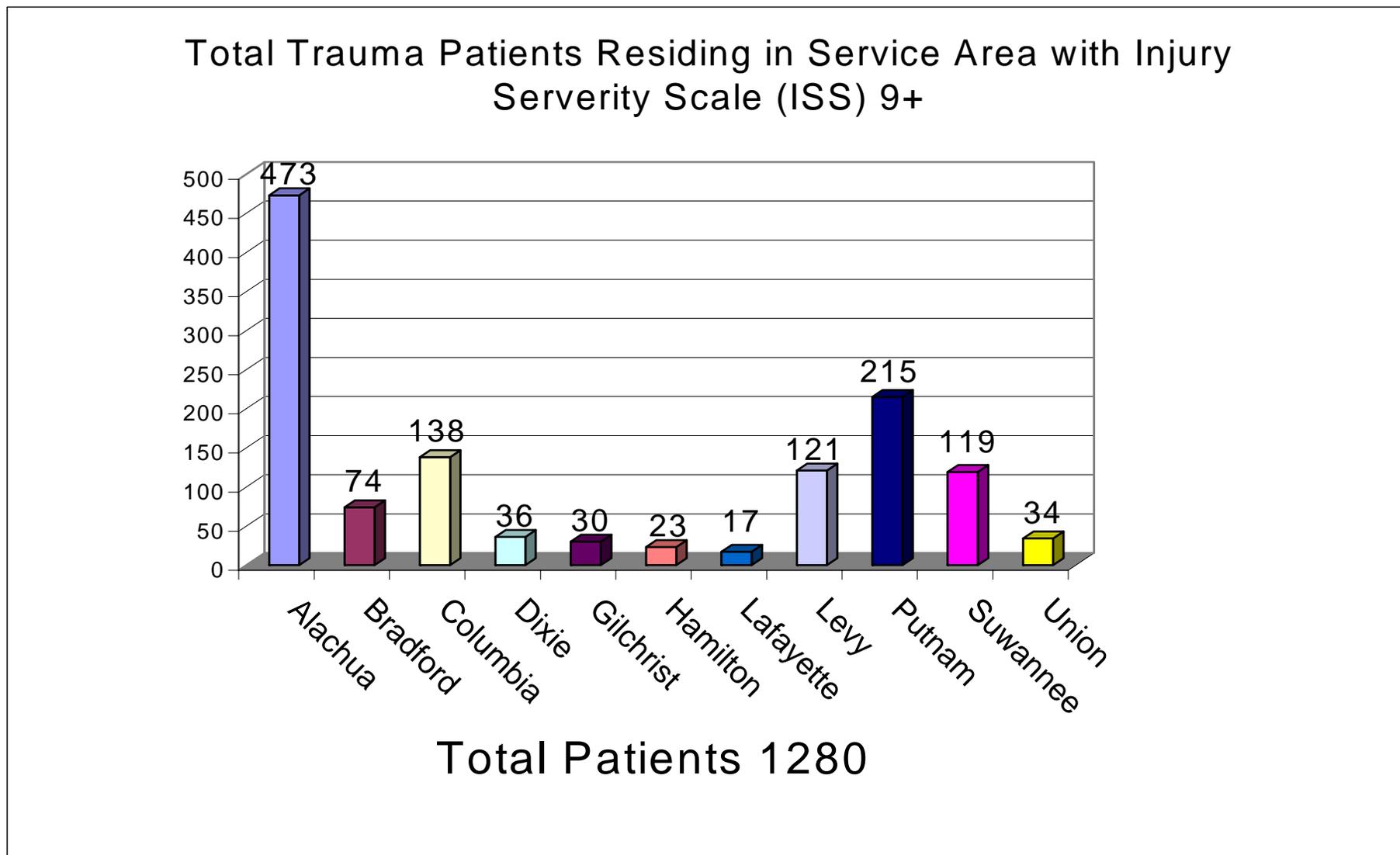


Note: See Table 3-3 for supporting data.

**Service Area 3**  
Nucleus County: Leon

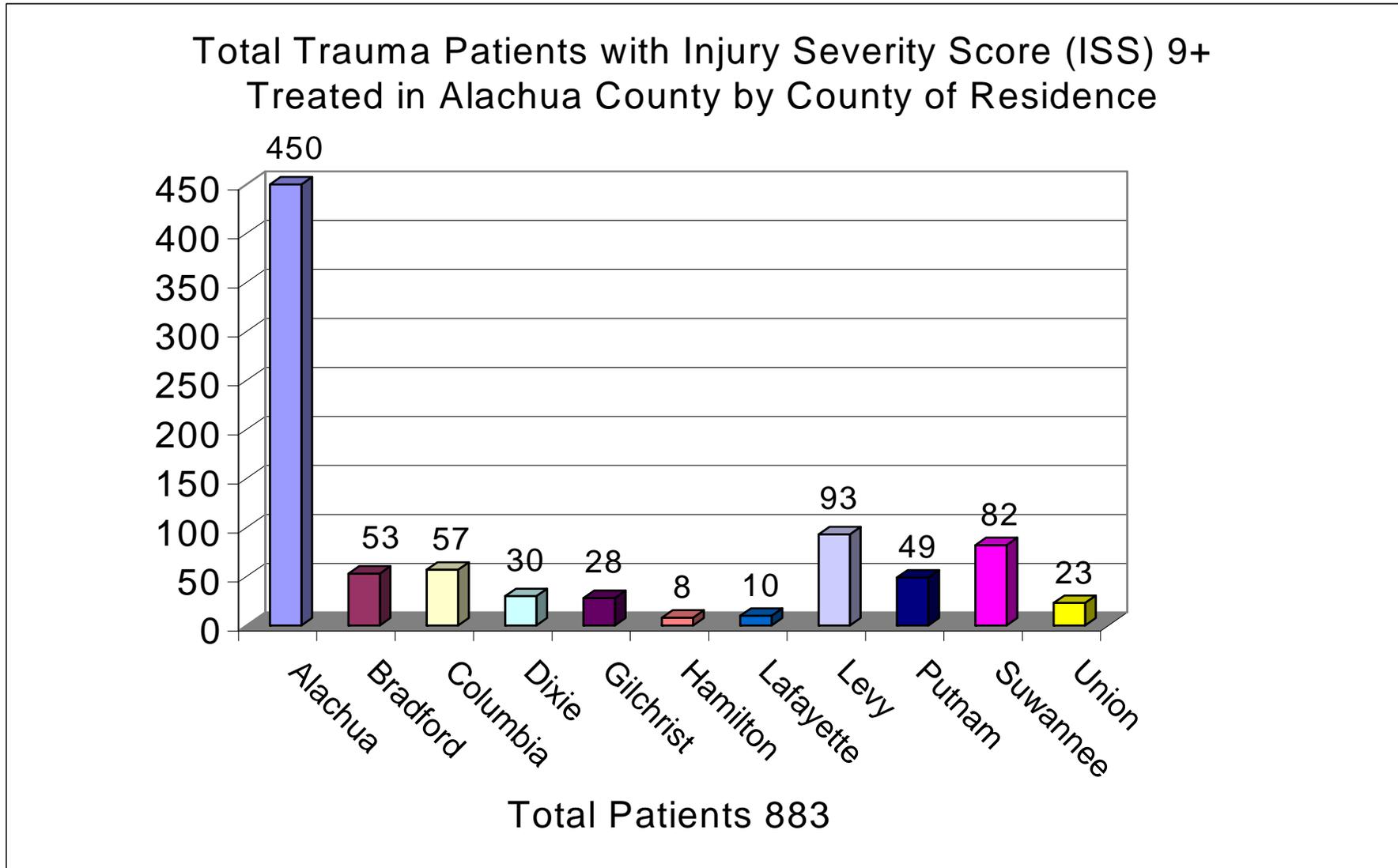
<b>Counties Sending to Nucleus County</b>										
Residence	Calhoun	Franklin	Gadsden	Jackson	Jefferson	Leon	Liberty	Madison	Taylor	Wakulla
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	32	24	108	123	29	411	19	29	53	50
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Leon	12	13	101	8	27	392	13	23	31	48
Percent Residents Treated in Leon	38%	54%	94%	7%	93%	95%	68%	79%	58%	96%
Counties Treating Significant Percentage of Residents of Counties Listed Above										
<b>Jackson</b>										
Total	16			100						
Percentage of Total Served	50%			81%						
<b>Bay</b>										
Total		7		10			3			
Percentage of Total Served		29%		8%			16%			
<b>Franklin</b>										
Total			3							
Percentage of Total Served			13%							
<b>Indian River</b>										
Total								2		
Percentage of Total Served								11%		
<b>Alachua</b>										
Total									10	
Percentage of Total Served									19%	
<b>Taylor</b>										
Total									11	
Percentage of Total Served									21%	

### Trauma Service Area 4



Note: See Table 4-3 for supporting data.

### Trauma Service Area 4

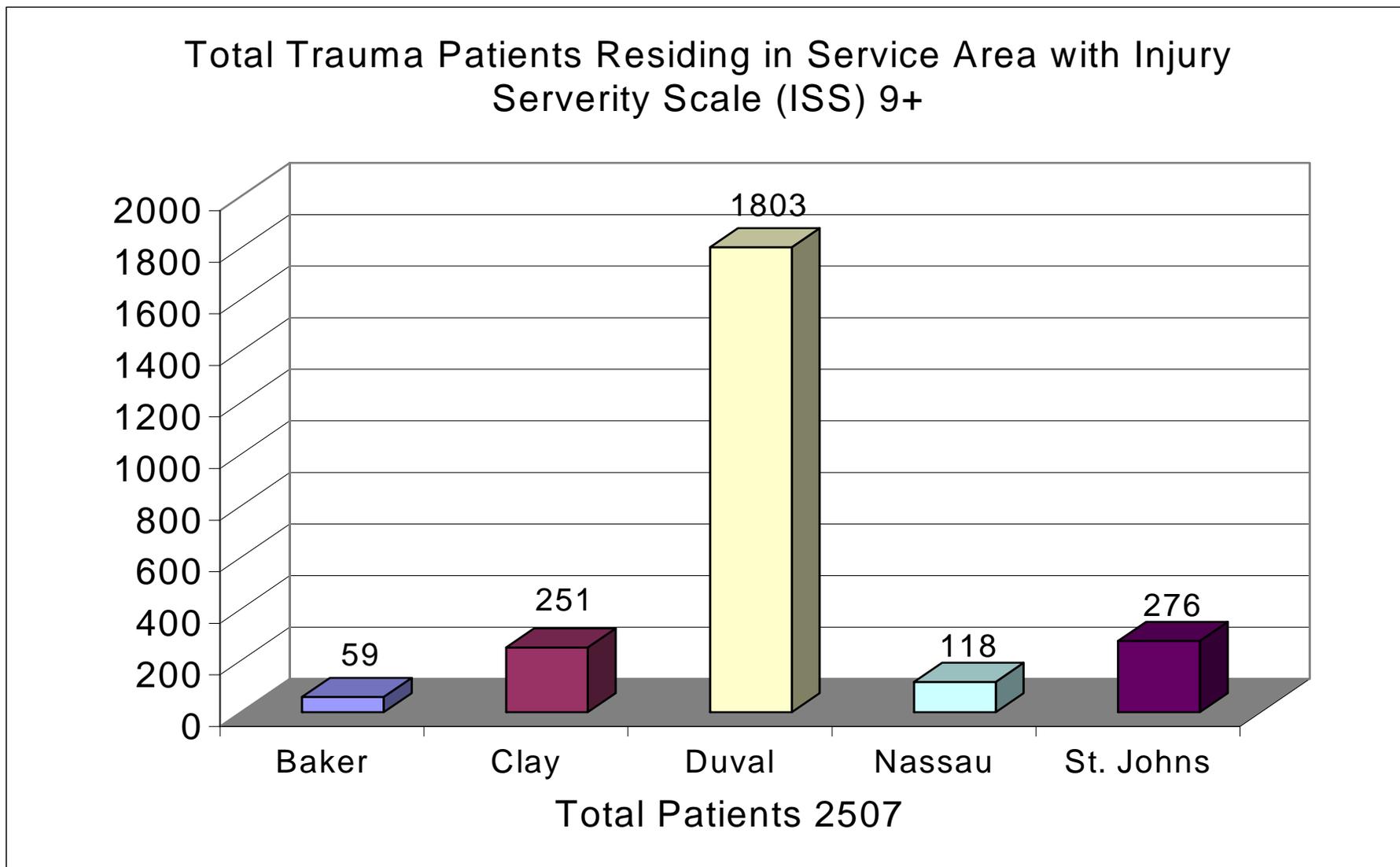


Note: See Table 4-3 for supporting data.

**Service Area 4**  
**Nucleus County: Alachua**

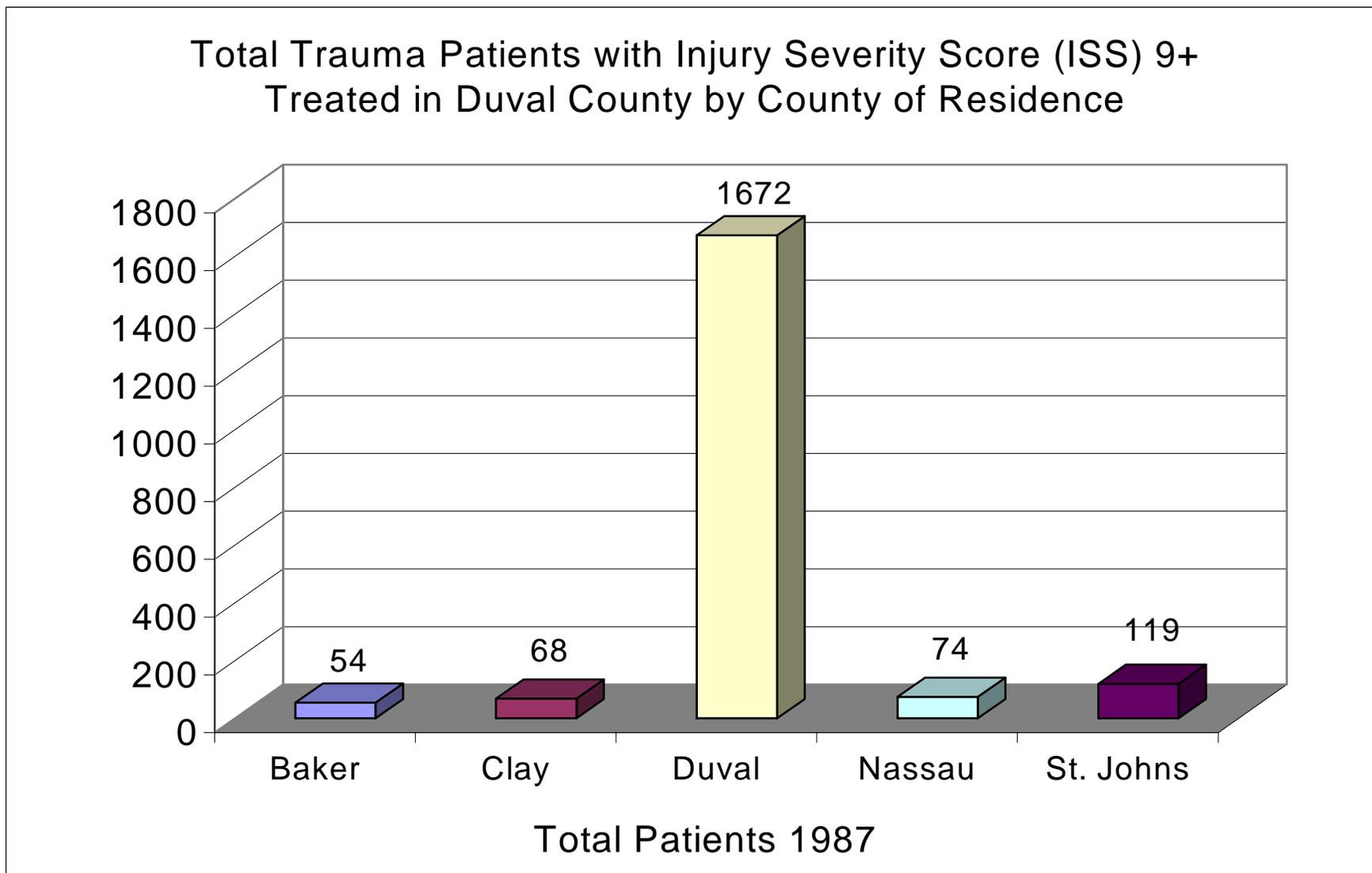
<b>Counties Sending to Nucleus County</b>											
Residence	<b>Alachua</b>	<b>Bradford</b>	<b>Columbia</b>	<b>Dixie</b>	<b>Gilchrist</b>	<b>Hamilton</b>	<b>Lafayette</b>	<b>Levy</b>	<b>Putnam</b>	<b>Suwannee</b>	<b>Union</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	473	74	138	36	30	23	17	121	215	119	34
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Alachua	450	53	57	30	28	8	10	93	49	82	23
Percent Residents Treated in Alachua	95%	72%	41%	83%	93%	35%	59%	77%	23%	69%	68%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>											
<b>Columbia</b>											
Total		0	55							16	
Percentage of Total Served			40%							13%	
<b>Duval</b>											
Total		15	23			7			40	10	9
Percentage of Total Served		20%	17%			30%			19%	8%	26%
<b>Putnam</b>											
Total									103		
Percentage of Total Served									48%		

### Trauma Service Area 5



Note: See Table 5-3 for supporting data.

### Trauma Service Area 5

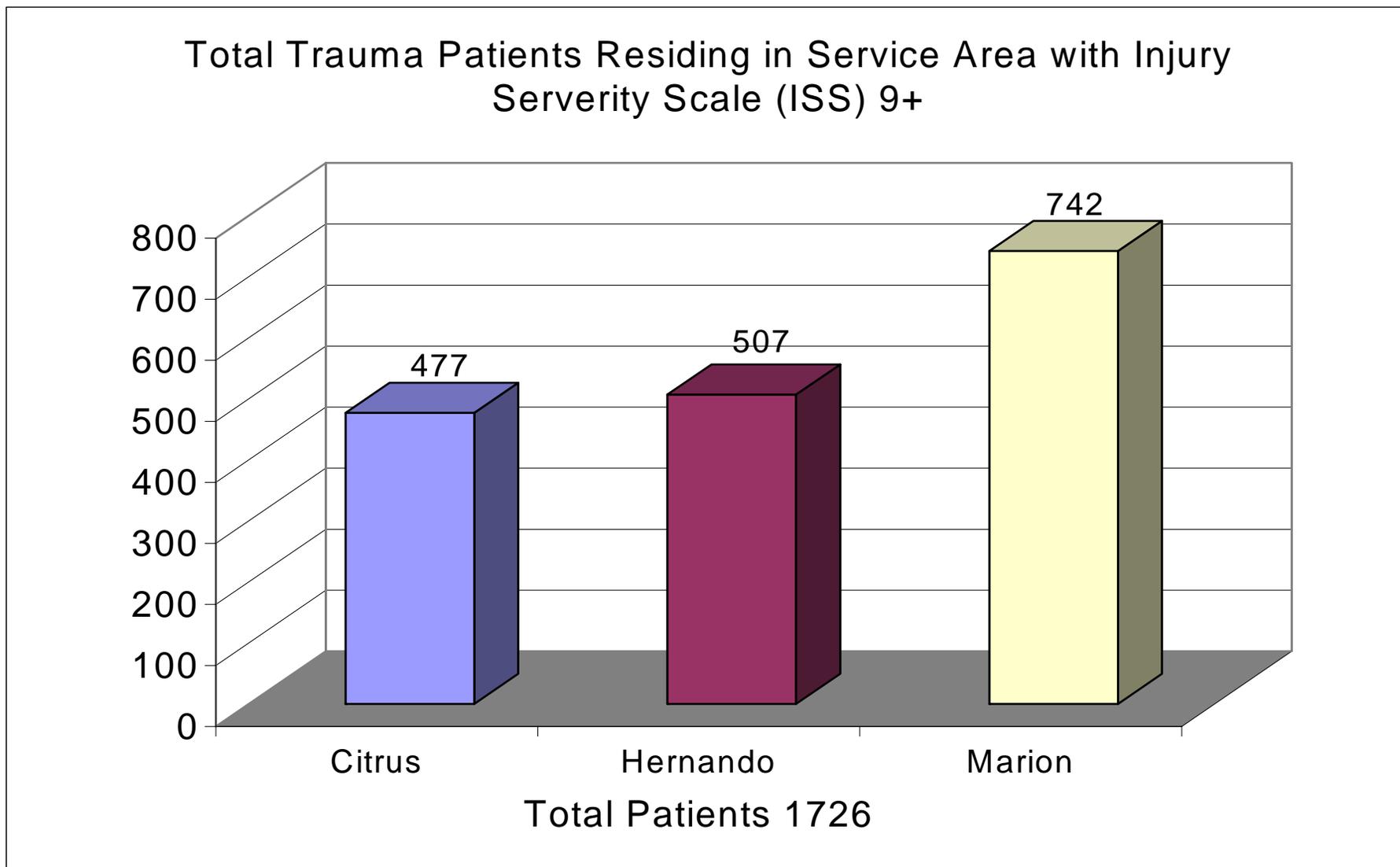


Note: See Table 5-3 for supporting data.

**Service Area 5**  
Nucleus County: Duval

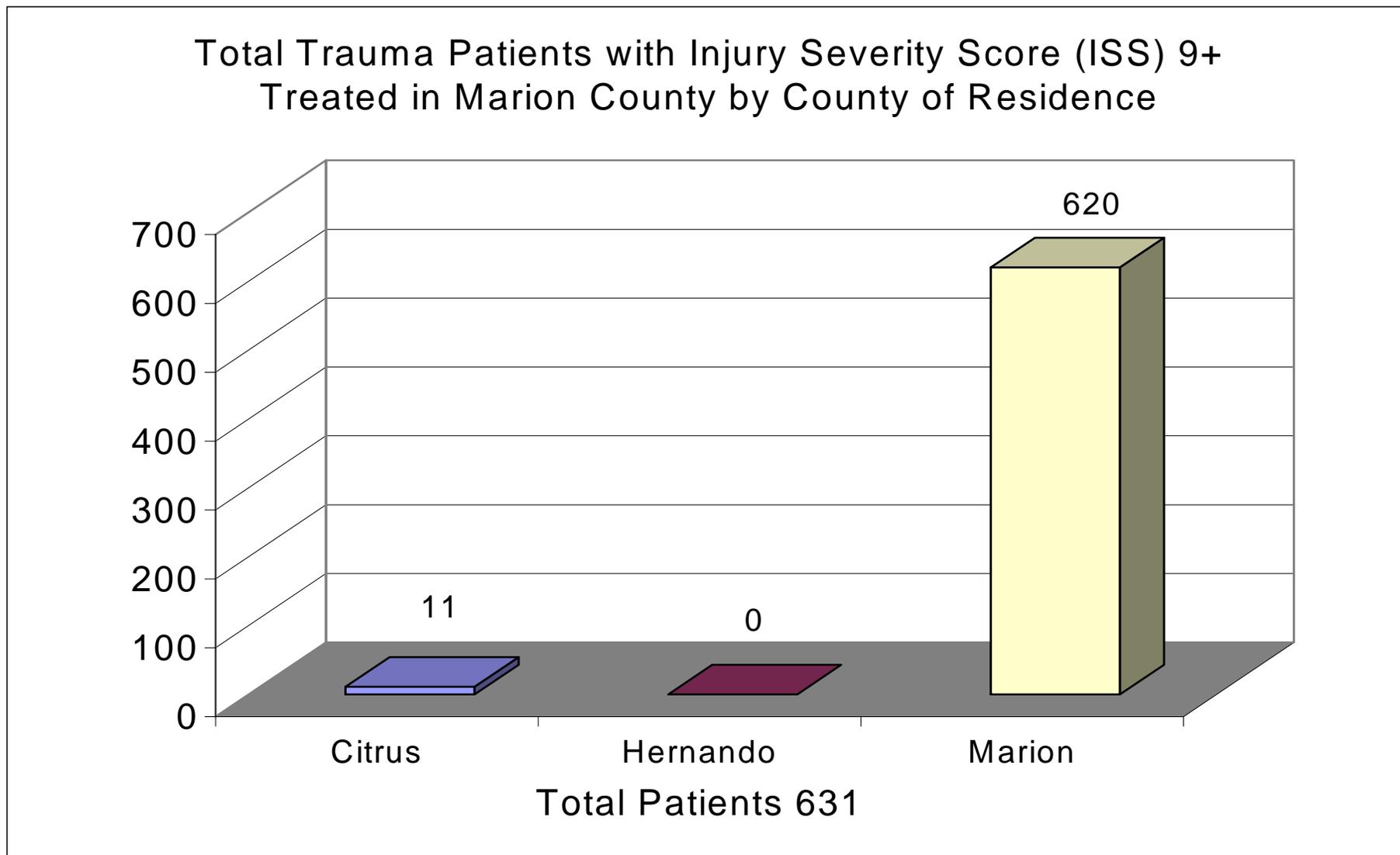
<b>Counties Sending to Nucleus County</b>					
Residence	<b>Baker</b>	<b>Clay</b>	<b>Duval</b>	<b>Nassau</b>	<b>St. Johns</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	59	251	1803	118	276
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Duval	54	68	1672	74	119
Percent Residents Treated in Duval	92%	27%	93%	63%	43%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>					
<b>Alachua</b>		31			
Total		12%			
Percentage of Total Served					
<b>Clay</b>		149			
Total		59%			
Percentage of Total Served					
<b>Nassau</b>				36	
Total				31%	
Percentage of Total Served					
<b>St. Johns</b>					131
Total					47%
Percentage of Total Served					

### Trauma Service Area 6



Note: See Table 6-3 for supporting data.

### Trauma Service Area 6

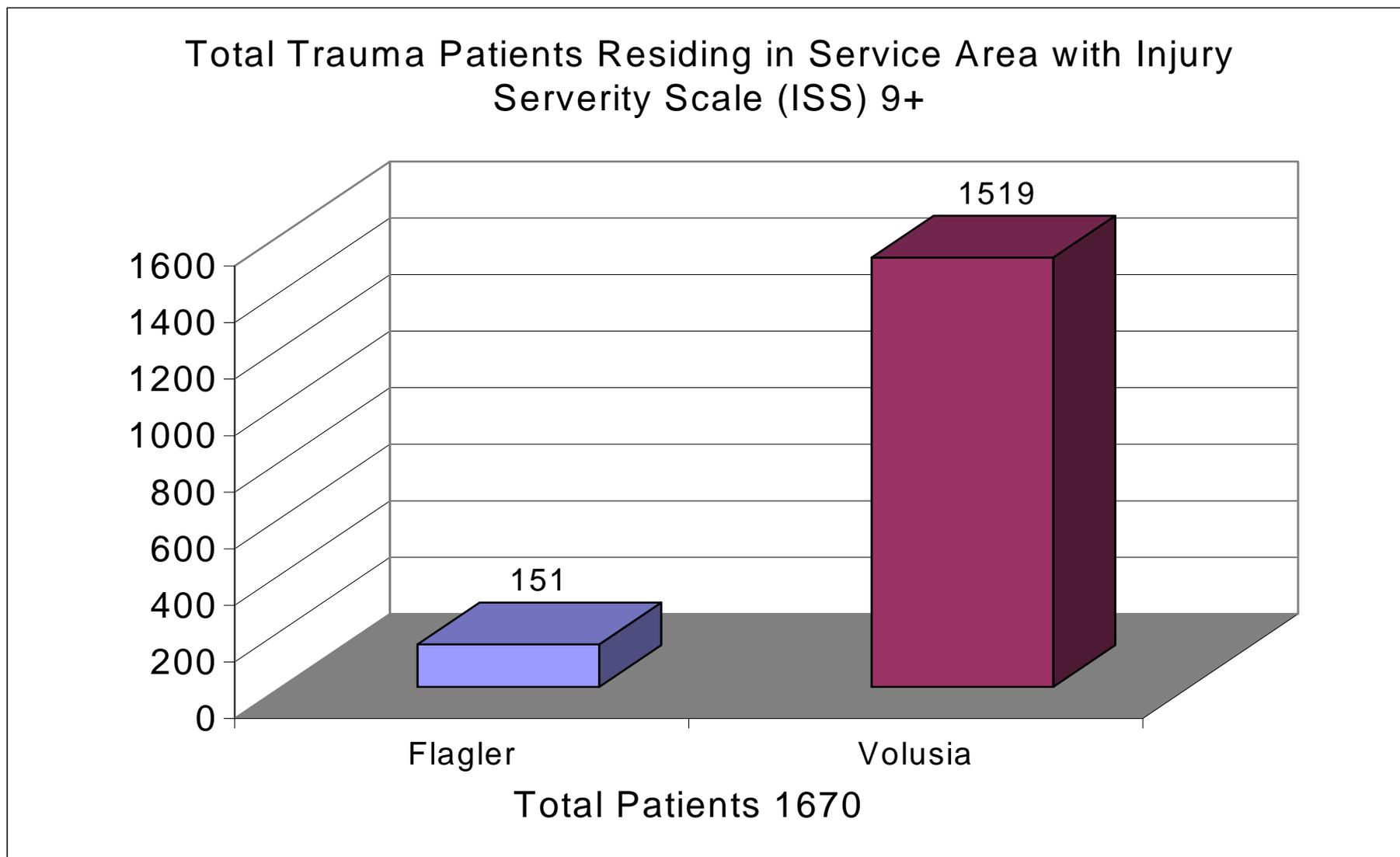


Note: See Table 6-3 for supporting data.

**Service Area 6**  
Nucleus County: Marion

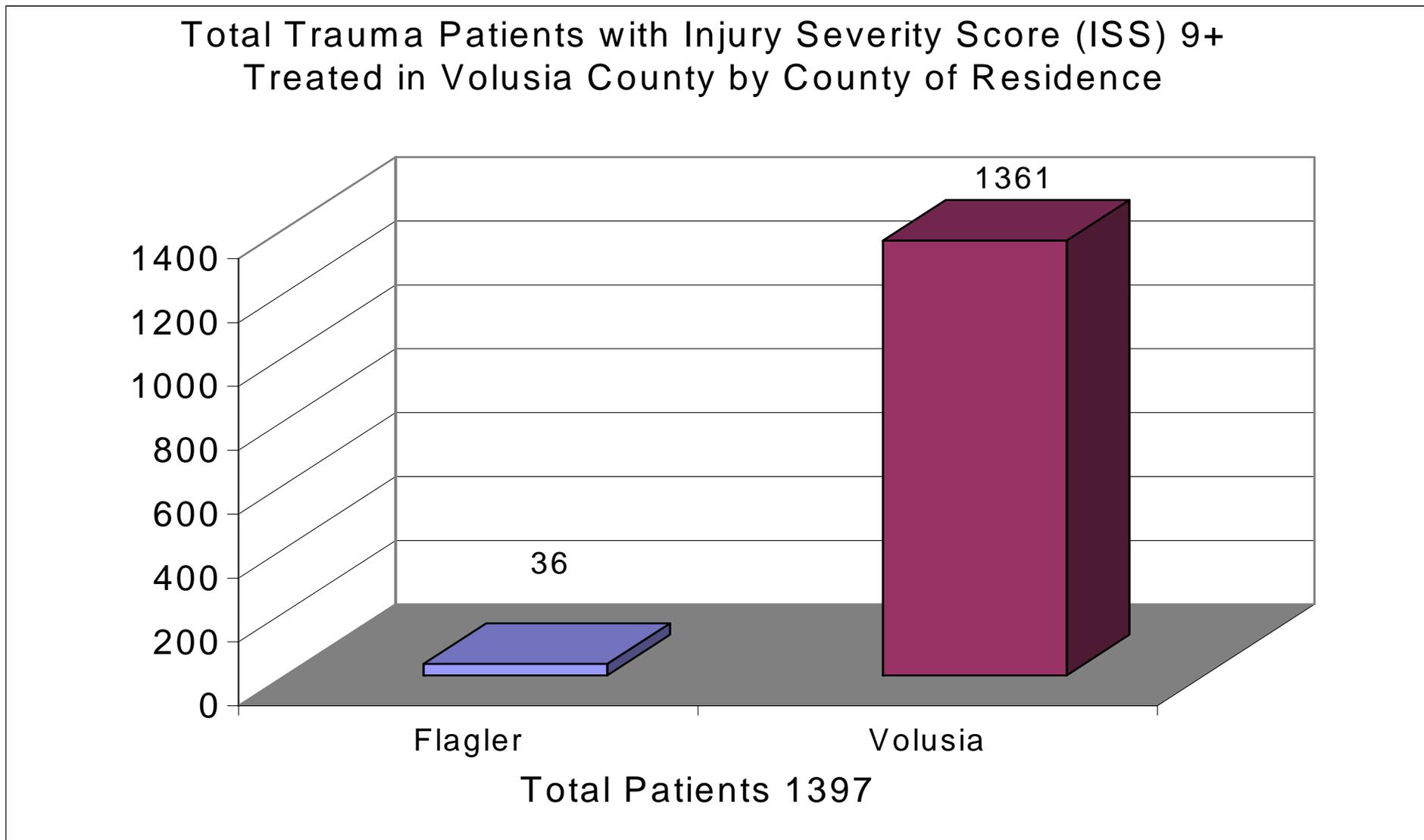
<b>Counties Sending to Nucleus County</b>			
Residence	<b>Citrus</b>	<b>Hernando</b>	<b>Marion</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	477	507	741
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Marion	11	0	620
Percent Residents Treated in Marion	2%	0%	84%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>			
<b>Citrus</b>			
Total	371		
Percentage of Total Served	78%		
<b>Alachua</b>			
Total	38		
Percentage of Total Served	8%		
<b>Hillsborough</b>			
Total	29	48	
Percentage of Total Served	6%	9%	
<b>Hernando</b>			
Total		380	
Percentage of Total Served		75%	

### Trauma Service Area 7



Note: See Table 7-3 for supporting data.

### Trauma Service Area 7

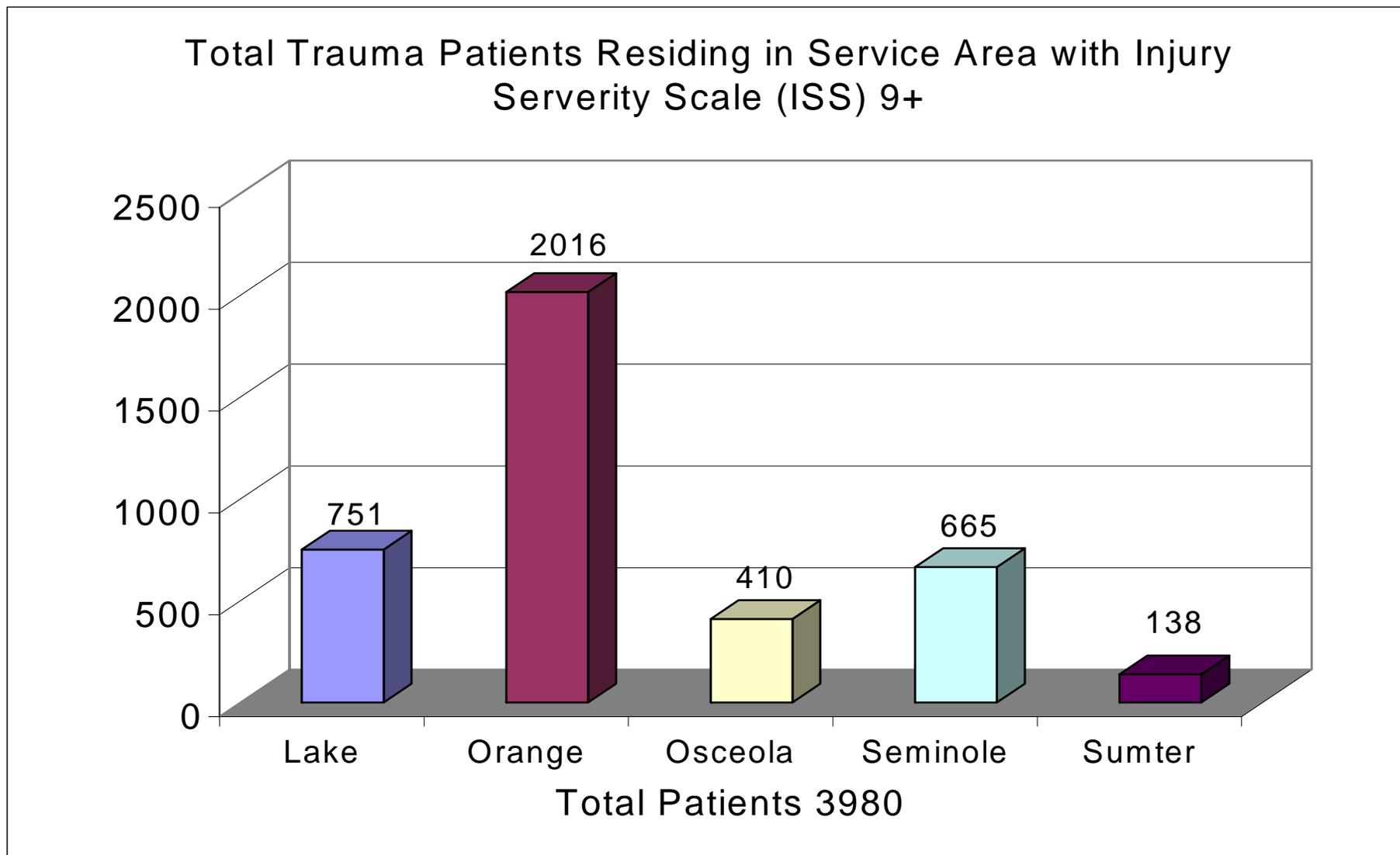


Note: See Table 7-3 for supporting data.

**Service Area 7**  
Nucleus County: Volusia

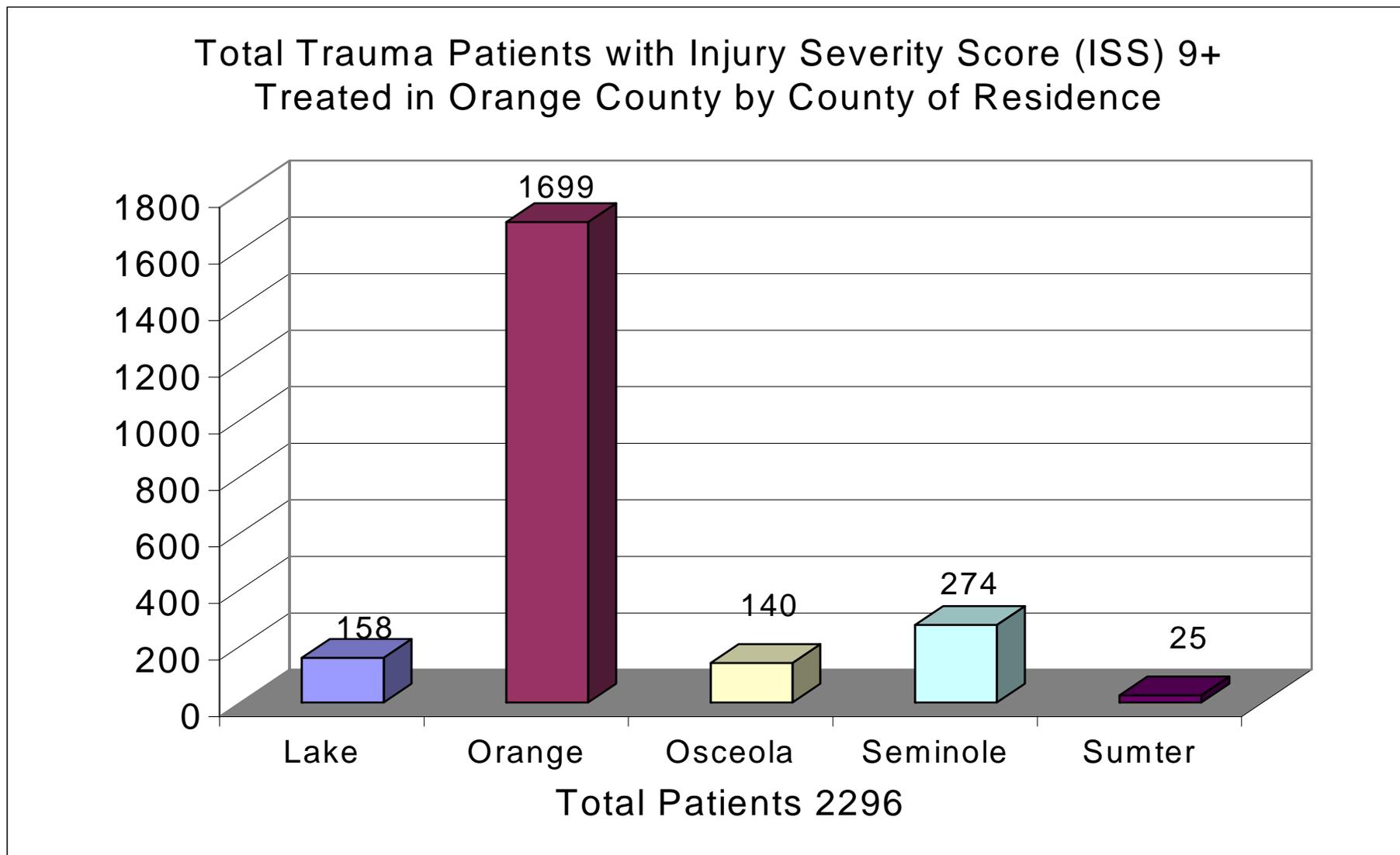
<b>Counties Sending to Nucleus County</b>		
Residence	<b>Flagler</b>	<b>Volusia</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	151	1519
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Volusia	36	1361
Percent Residents Treated in Volusia	24%	90%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>		
<b>Flagler</b>		
Total	87	
Percentage of Total Served	58%	
<b>Duval</b>		
Total	16	
Percentage of Total Served	11%	

### Trauma Service Area 8



Note: See Table 8-3 for supporting data.

### Trauma Service Area 8

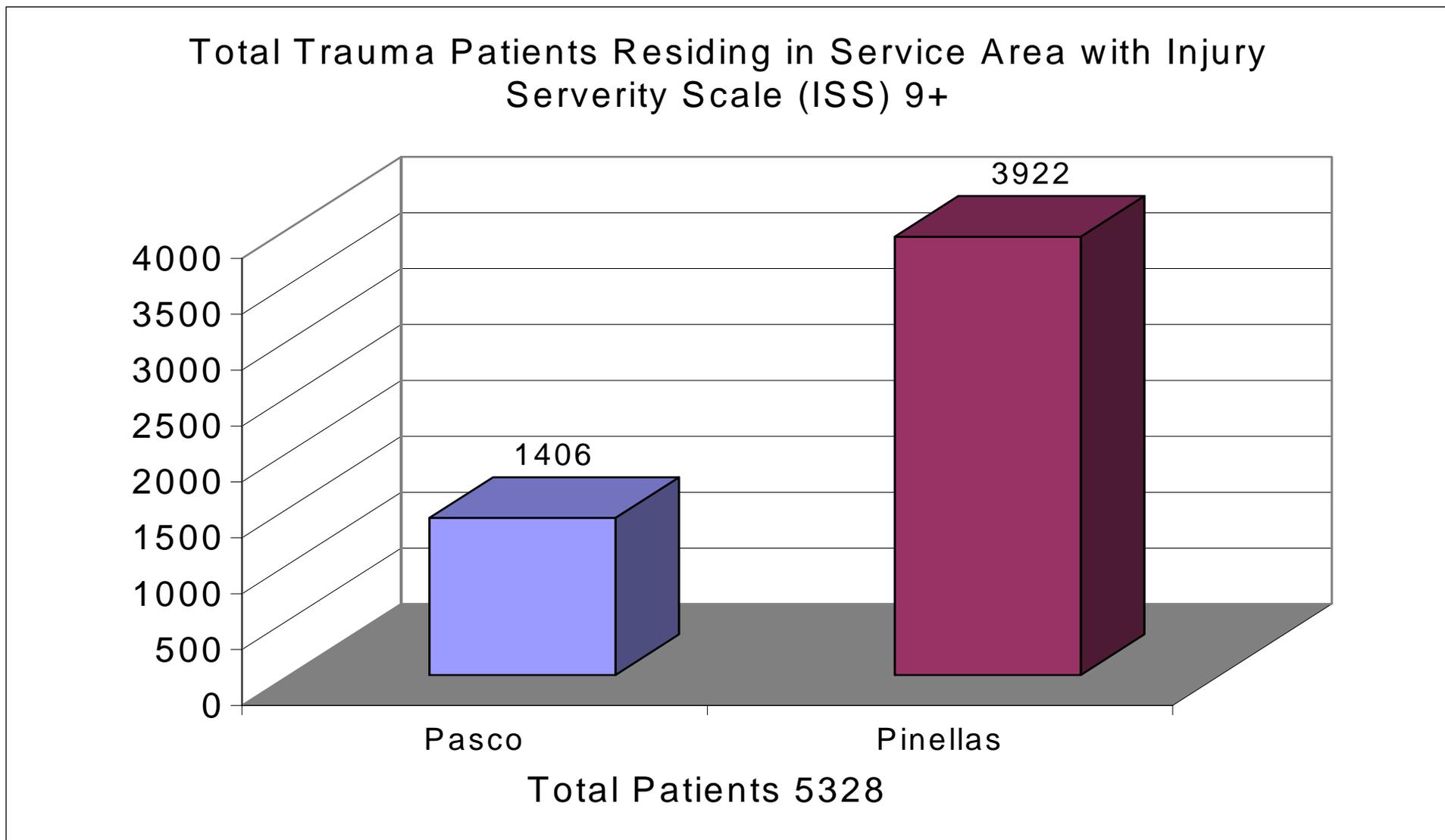


Note: See Table 8-3 for supporting data.

**Service Area 8**  
Nucleus County: Orange

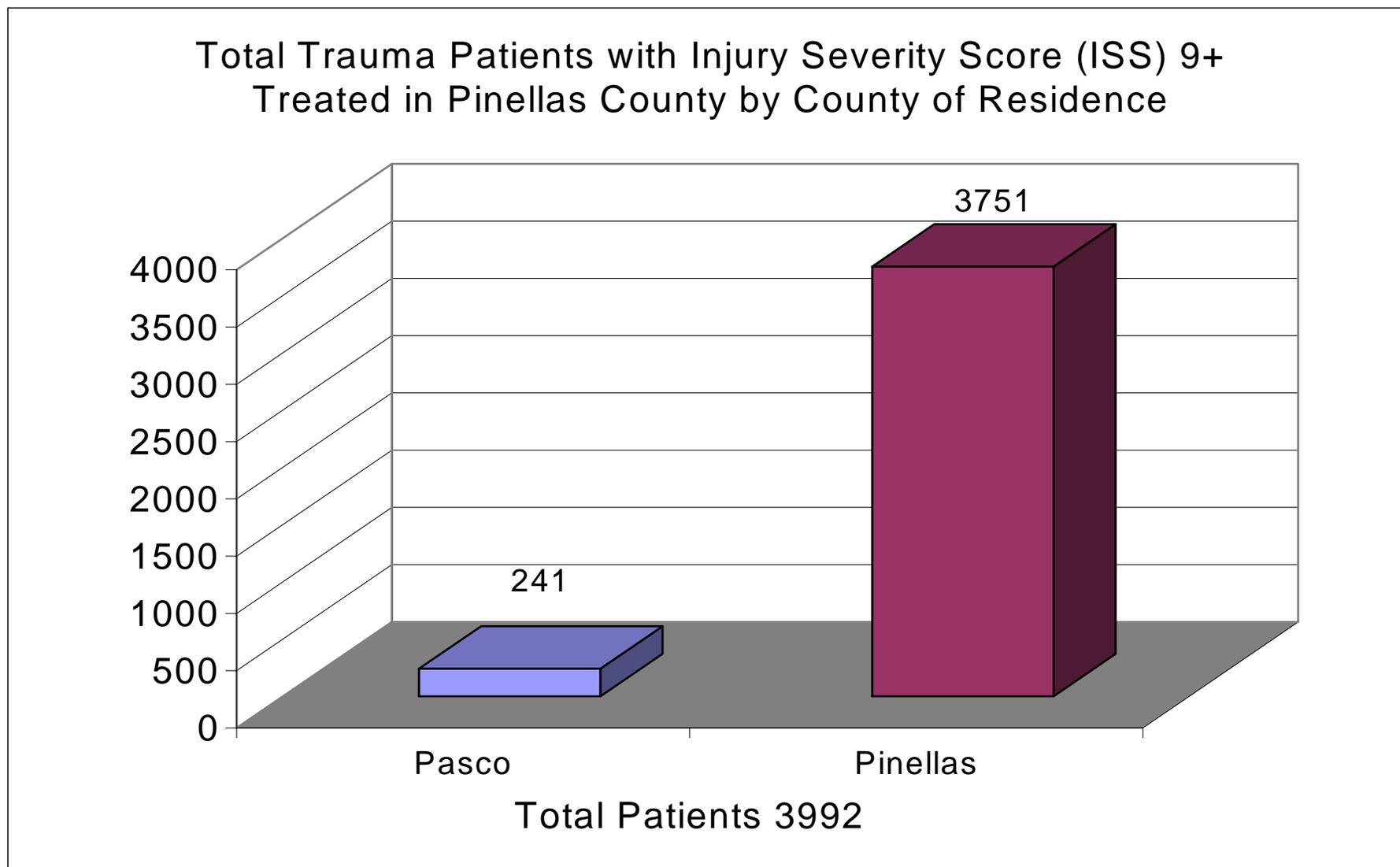
<b>Counties Sending to Nucleus County</b>					
Residence	Lake	Orange	Osceola	Seminole	Sumter
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	751	2016	410	665	138
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Orange	158	1699	140	274	25
Percent Residents Treated in Orange	21%	84%	34%	41%	18%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>					
<b>Lake</b>					
Total	511				60
Percentage of Total Served	68%				43%
<b>Osceola</b>					
Total			250		
Percentage of Total Served			61%		
<b>Seminole</b>					
Total				361	
Percentage of Total Served				54%	
<b>Citrus</b>					
Total					15
Percentage of Total Served					11%

### Trauma Service Area 9



Note: See Table 9-3 for supporting data.

### Trauma Service Area 9

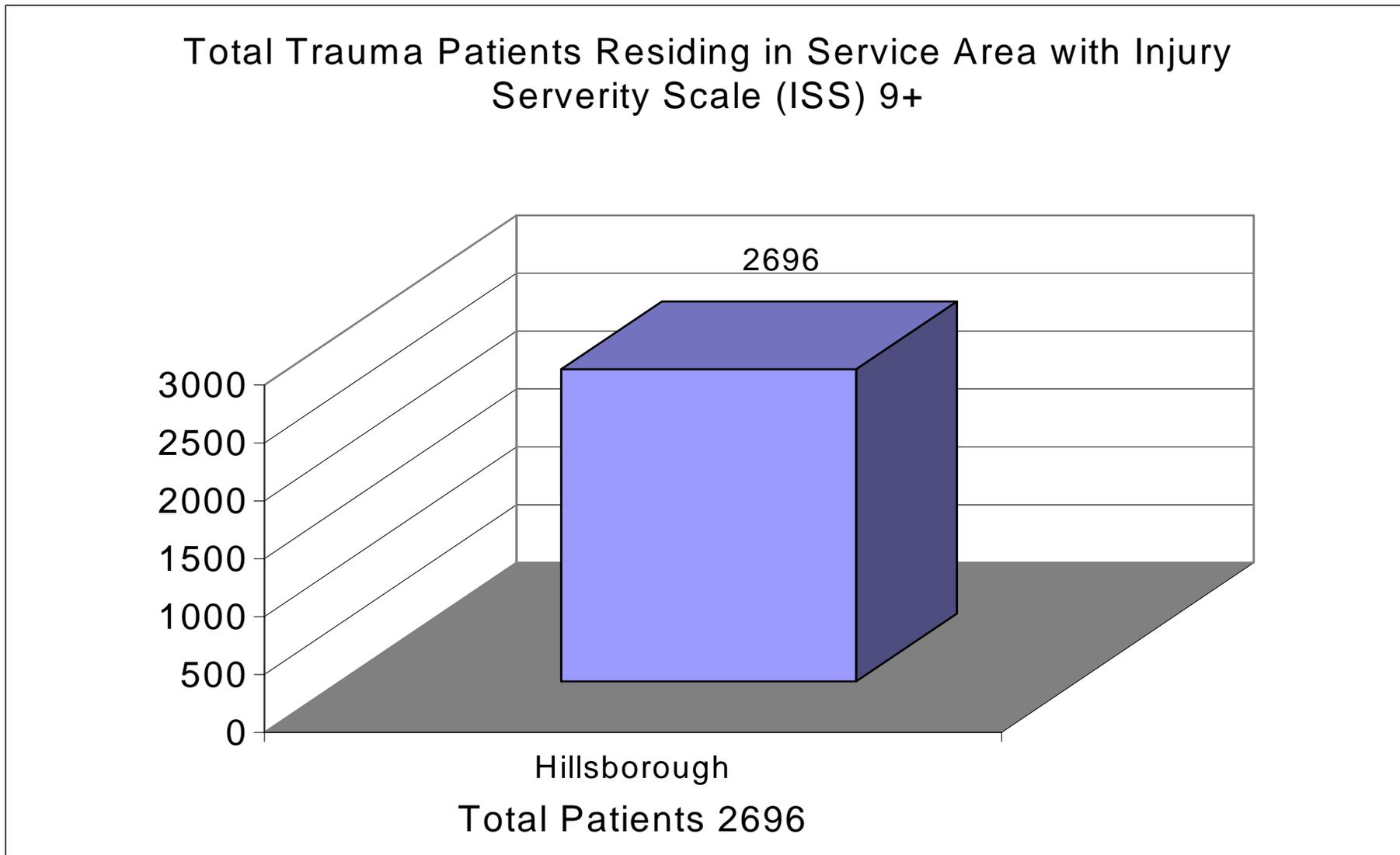


Note: See Table 9-3 for supporting data.

**Service Area 9**  
Nucleus County: Pinellas

<b>Counties Sending to Nucleus County</b>		
Residence	<b>Pasco</b>	<b>Pinellas</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	1406	3922
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Pinellas	241	3751
Percent Residents Treated in Pinellas	17%	96%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>		
<b>Pasco</b>		
Total	948	
Percentage of Total Served	67%	
<b>Hillsborough</b>		
Total	171	
Percentage of Total Served	12%	

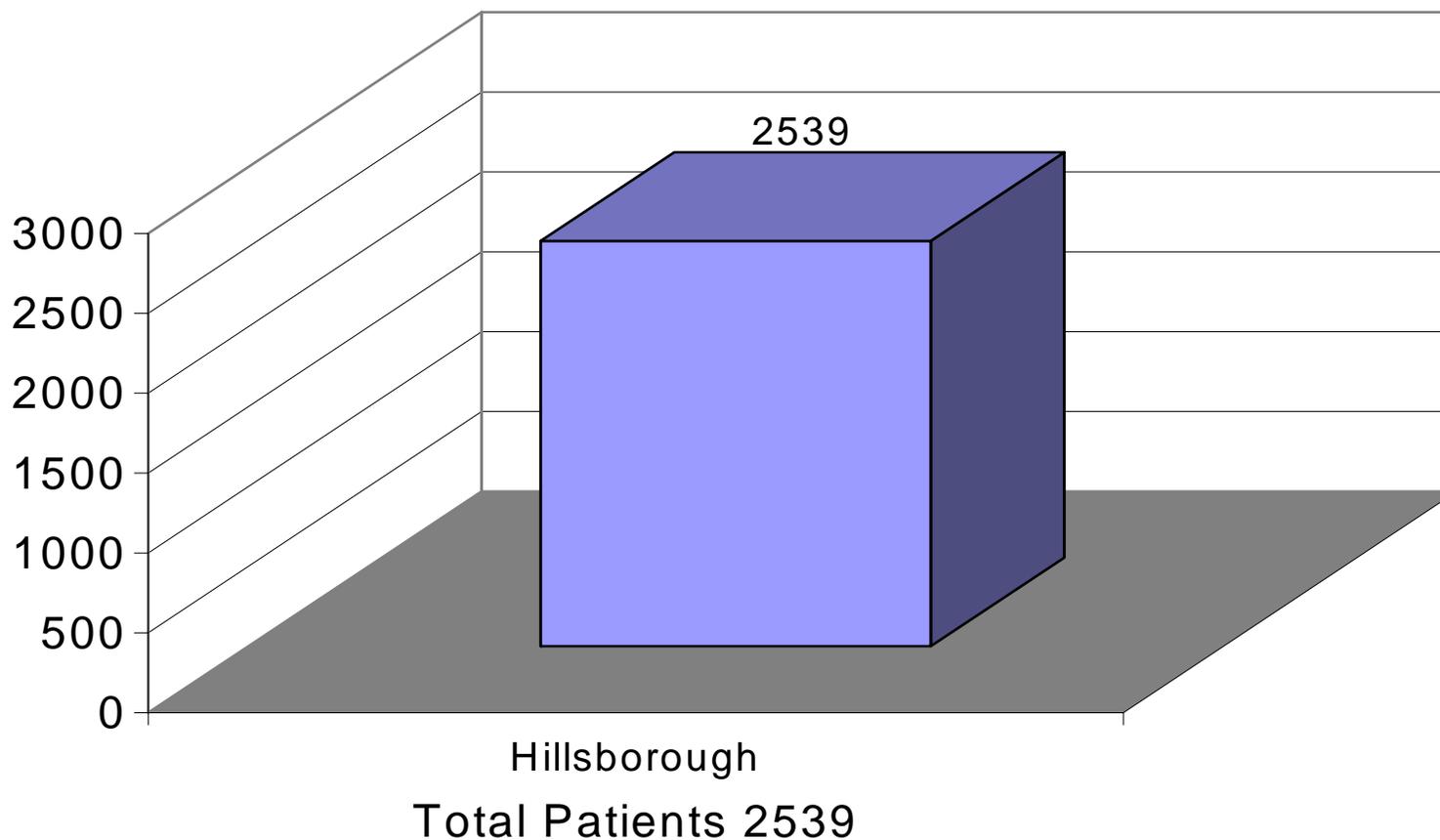
### Trauma Service Area 10



Note: See Table 10-3 for supporting data.

### Trauma Service Area 10

Total Trauma Patients with Injury Severity Score (ISS) 9+  
Treated in Hillsborough County by County of Residence



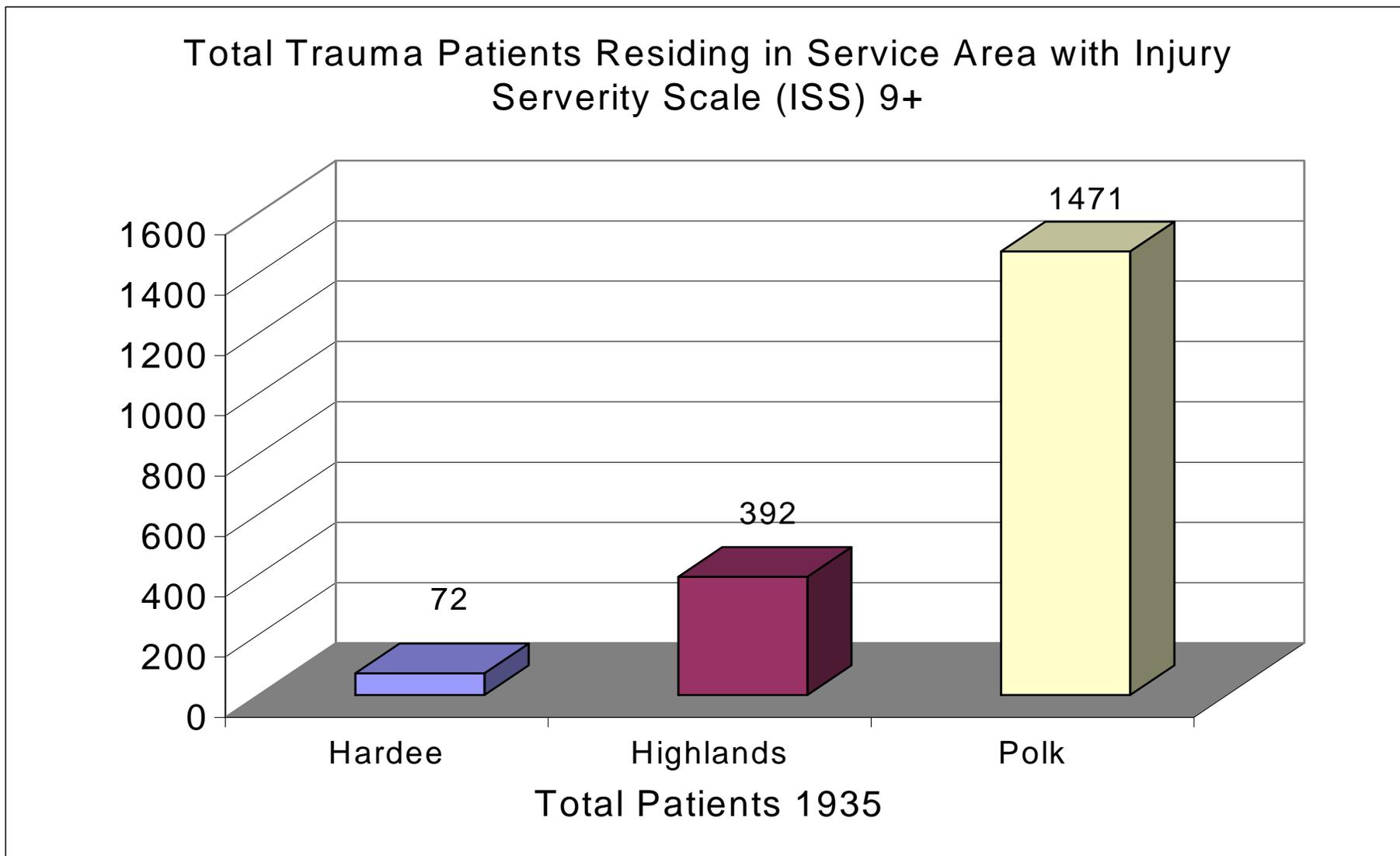
Note: See Table 10-3 for supporting data.

**Service Area 10**

Nucleus County: Hillsborough

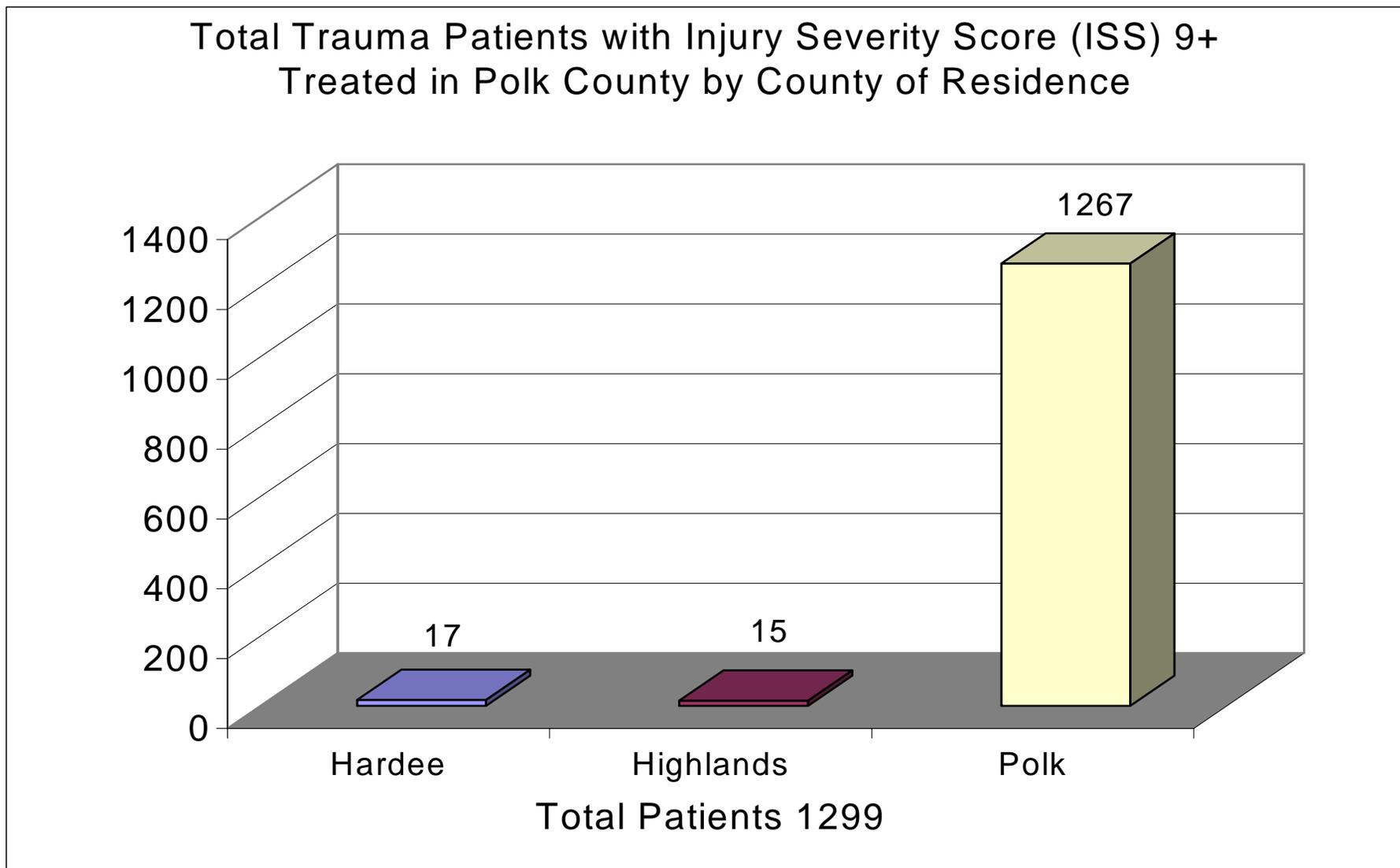
<b>Counties Sending to Nucleus County</b>	
Residence	<b>Hillsborough</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	2696
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Hillsborough	2539
Percent Residents Treated in Hillsborough	94%
Counties Treating Significant Percentage of Residents of Counties Listed Above	

### Trauma Service Area 11



Note: See Table 11-3 for supporting data.

### Trauma Service Area 11

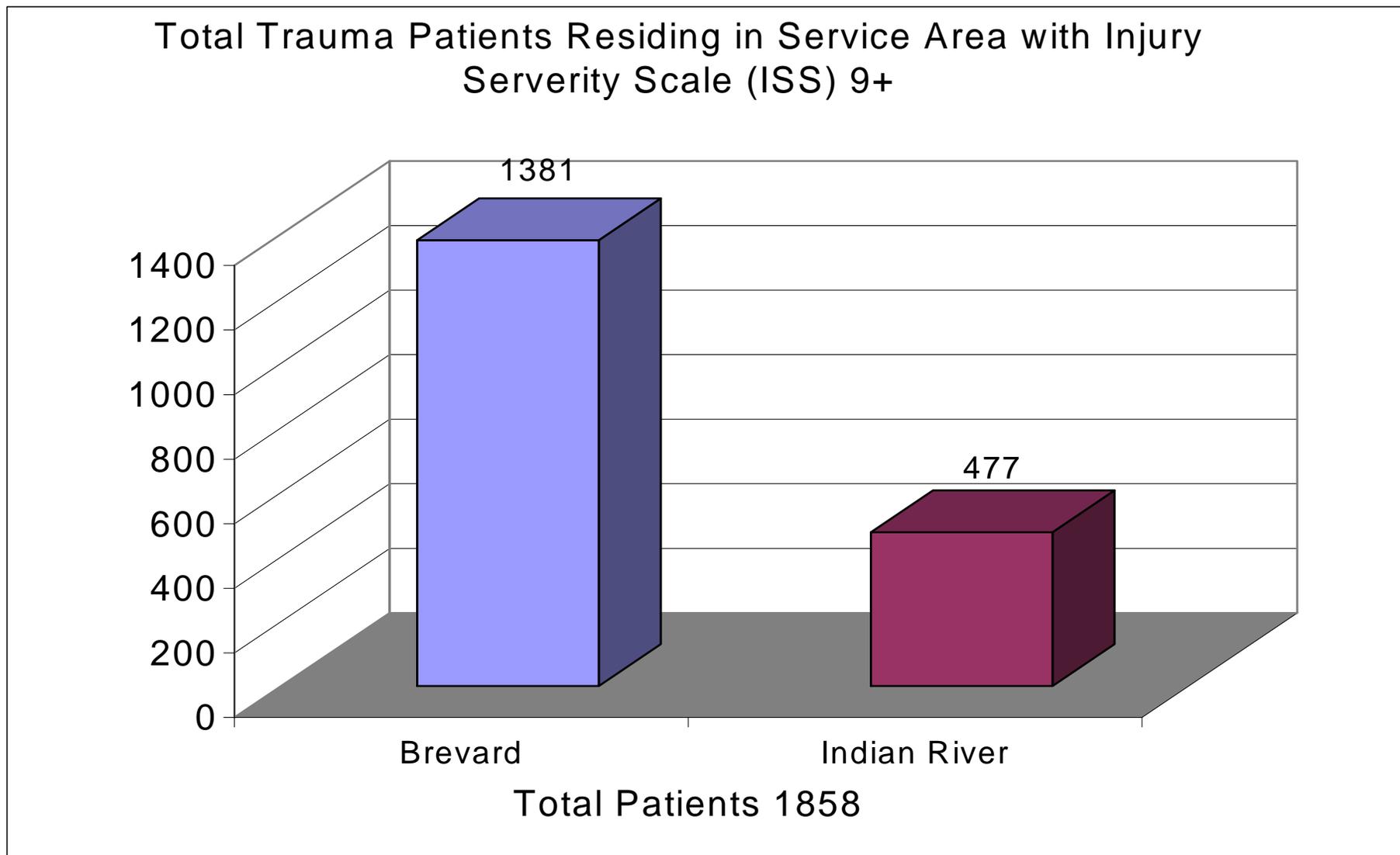


Note: See Table 11-3 for supporting data.

**Service Area 11**  
Nucleus County: Polk

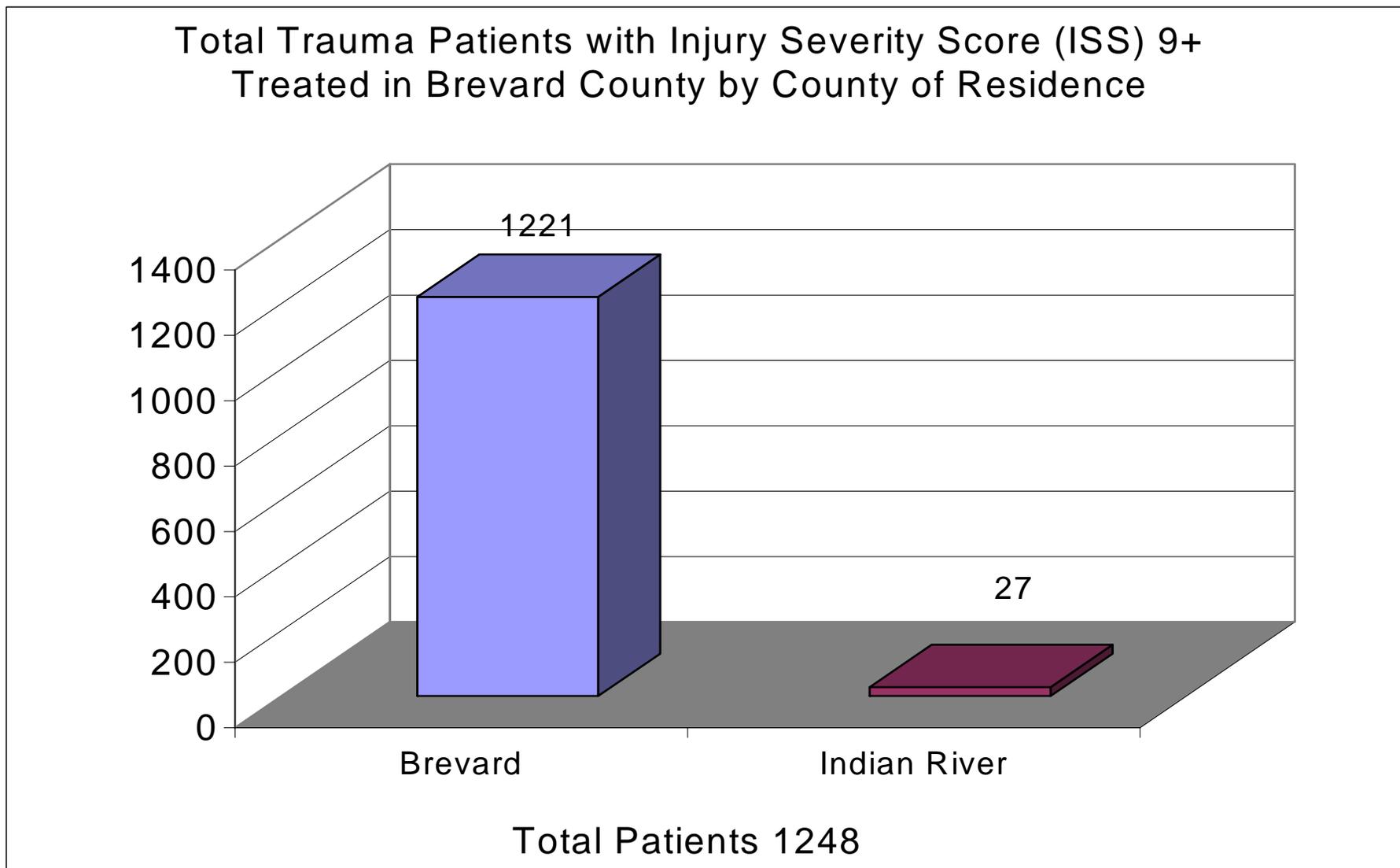
<b>Counties Sending to Nucleus County</b>			
Residence	<b>Hardee</b>	<b>Highlands</b>	<b>Polk</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	72	392	1471
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Polk	17	15	1267
Percent Residents Treated in Polk	24%	4%	86%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>			
<b>Highlands</b>			
Total	17	277	
Percentage of Total Served	24%	71%	
<b>Hillsborough</b>			
Total	23	60	
Percentage of Total Served	32%	15%	

### Trauma Service Area 12



Note: See Table 12-3 for supporting data.

### Trauma Service Area 12

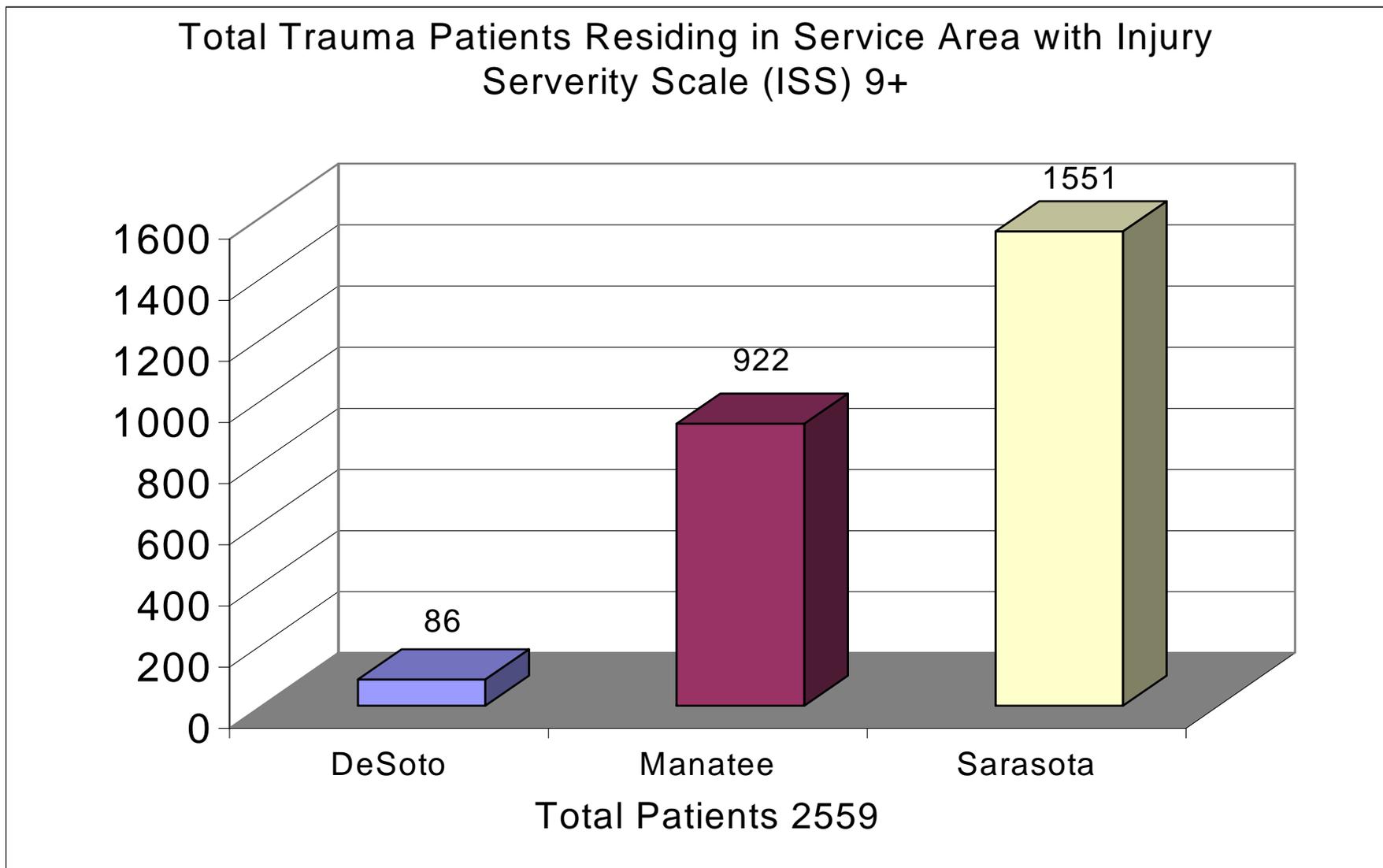


Note: See Table 12-3 for supporting data.

Service Area 12  
Nucleus County: Brevard

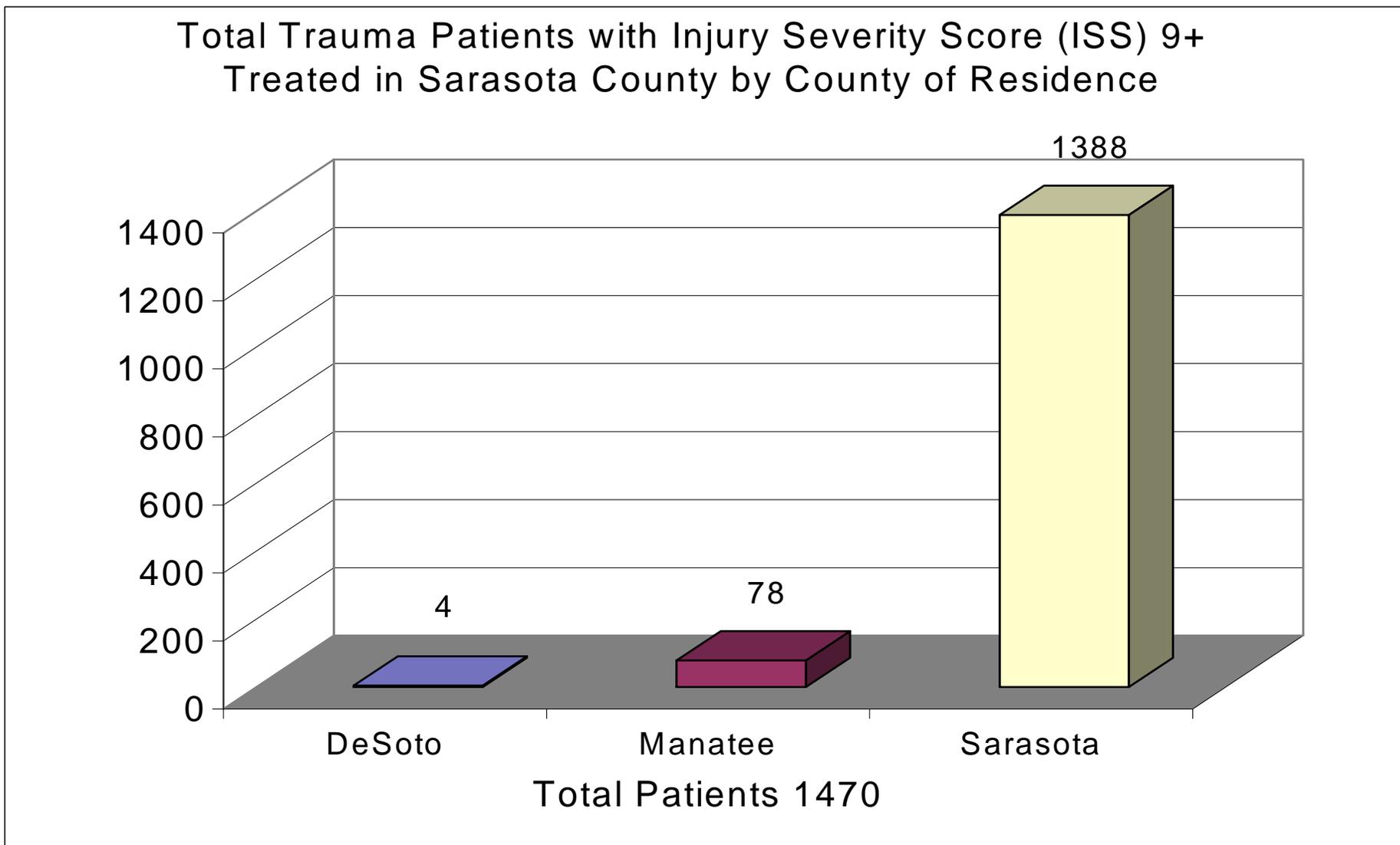
<b>Counties Sending to Nucleus County</b>		
Residence	<b>Brevard</b>	<b>Indian River</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	1381	477
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Brevard	1221	27
Percent Residents Treated in Brevard	88%	6%
Counties Treating Significant Percentage of Residents of Counties Listed Above		
<b>Indian River</b>		
Total		404
Percentage of Total Served		85%

### Trauma Service Area 13



Note: See Table 13-3 for supporting data.

### Trauma Service Area 13



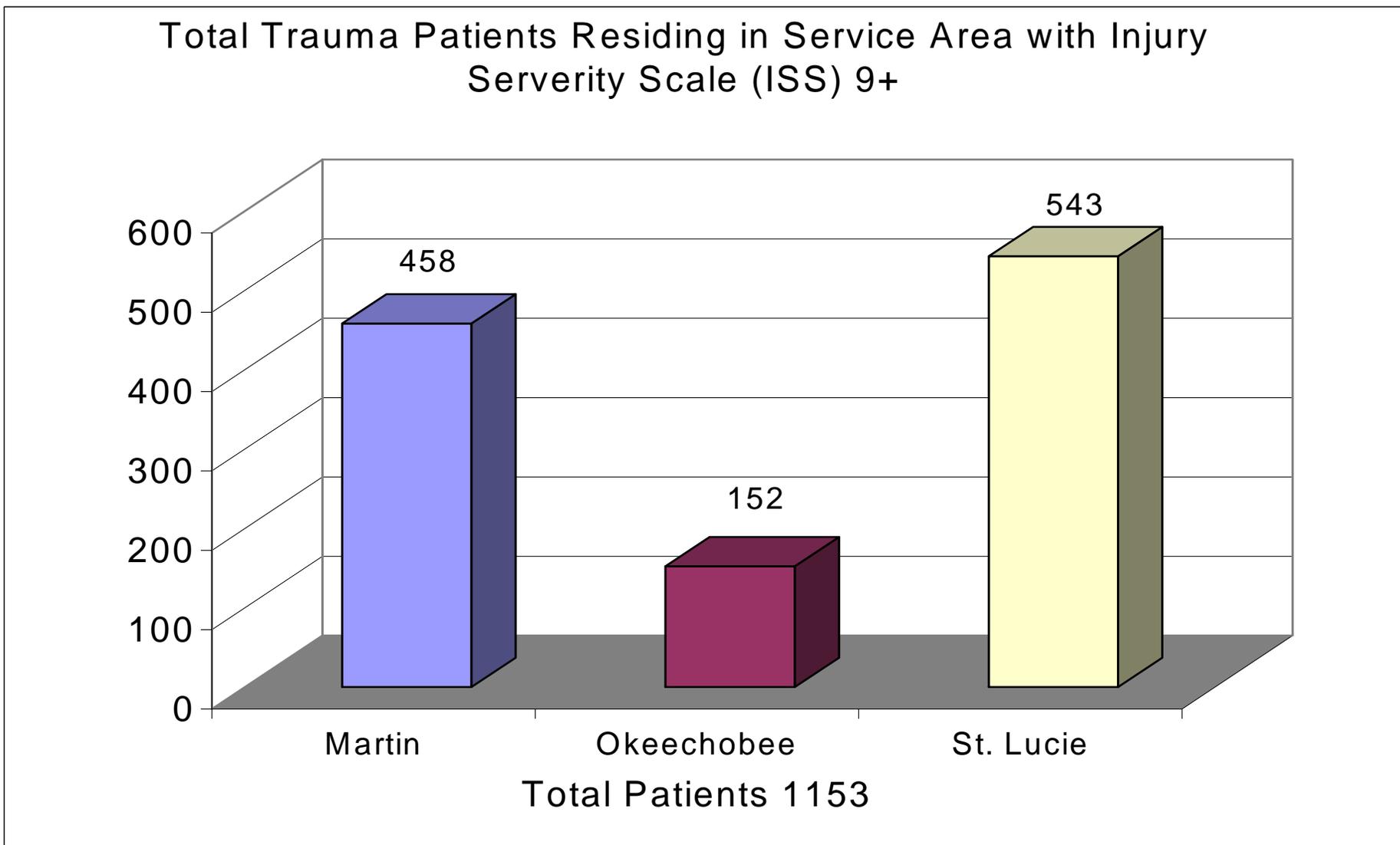
Note: See Table 13-3 for supporting data.

**Service Area 13**

Nucleus County: Sarasota

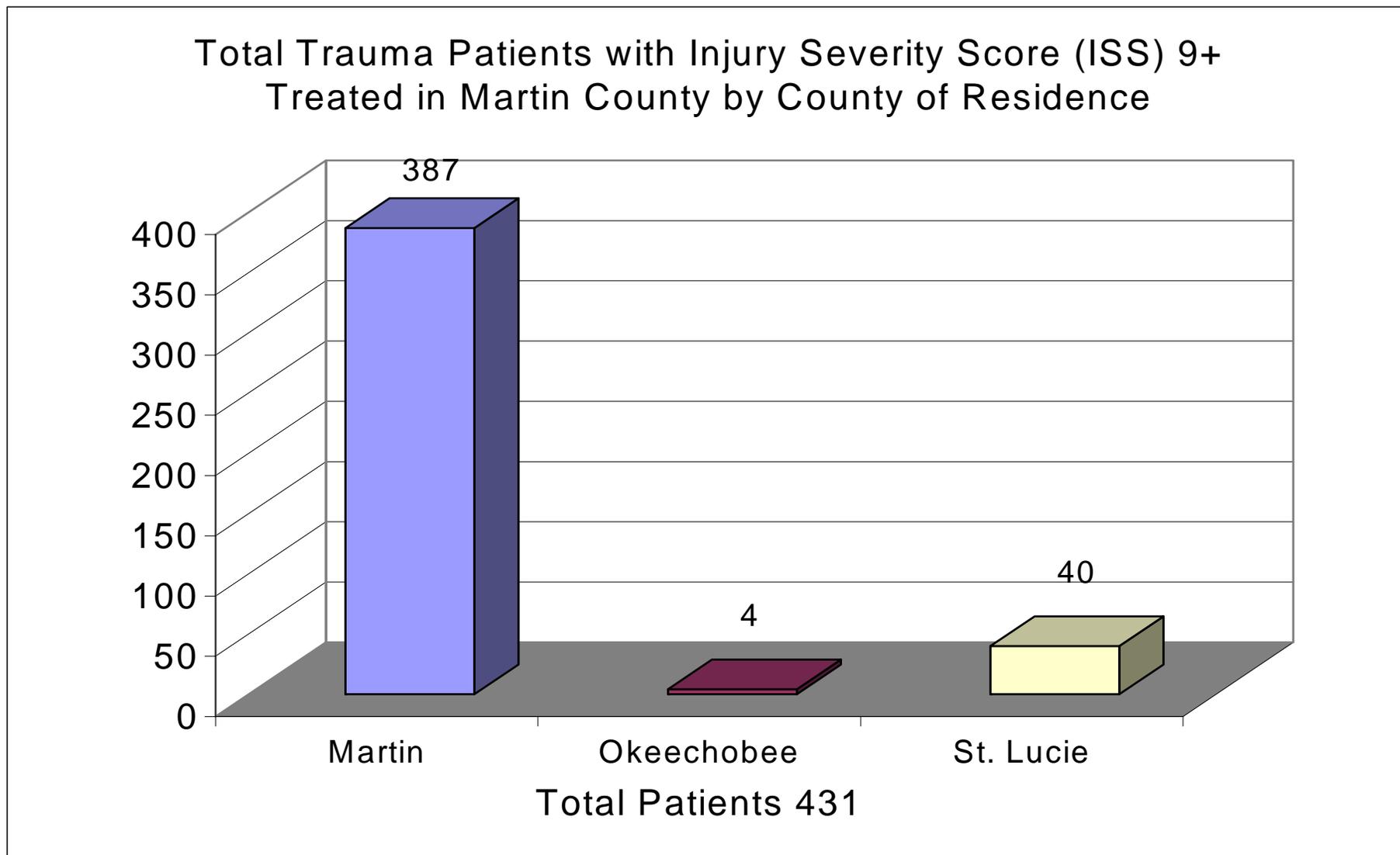
<b>Counties Sending to Nucleus County</b>			
Residence	<b>DeSoto</b>	<b>Manatee</b>	<b>Sarasota</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	86	922	1551
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Sarasota	4	78	1388
Percent Residents Treated in Sarasota	5%	8%	89%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>			
<b>DeSoto</b>			
Total	27		
Percentage of Total Served	31%		
<b>Charlotte</b>			
Total	25		
Percentage of Total Served	29%		
<b>Pinellas</b>			
Total		86	
Percentage of Total Served		9%	
<b>Manatee</b>			
Total		736	
Percentage of Total Served		80%	

### Trauma Service Area 14



Note: See Table 14-3 for supporting data.

### Trauma Service Area 14



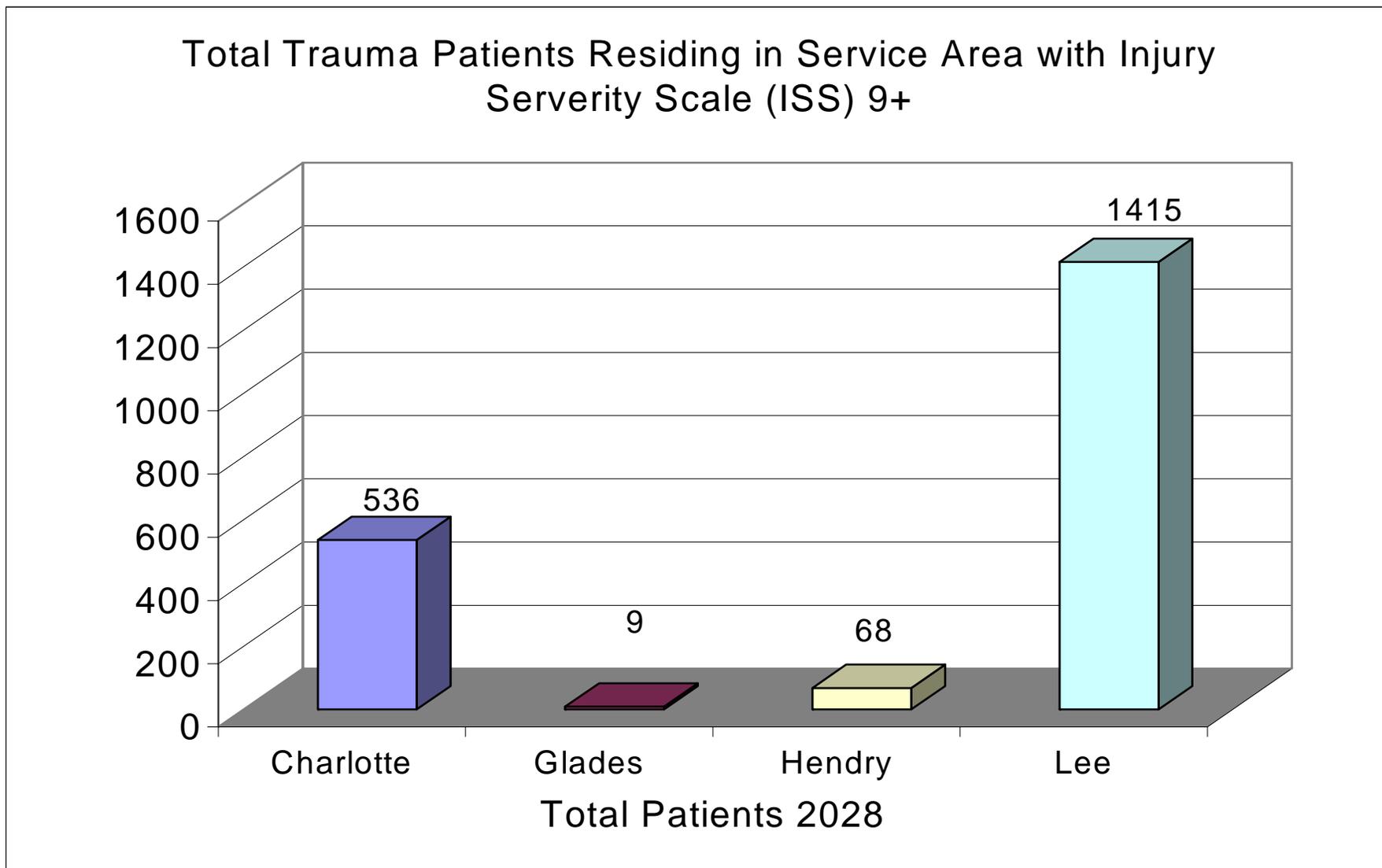
Note: See Table 14-3 for supporting data.

**Service Area 14**

Nucleus County: Martin

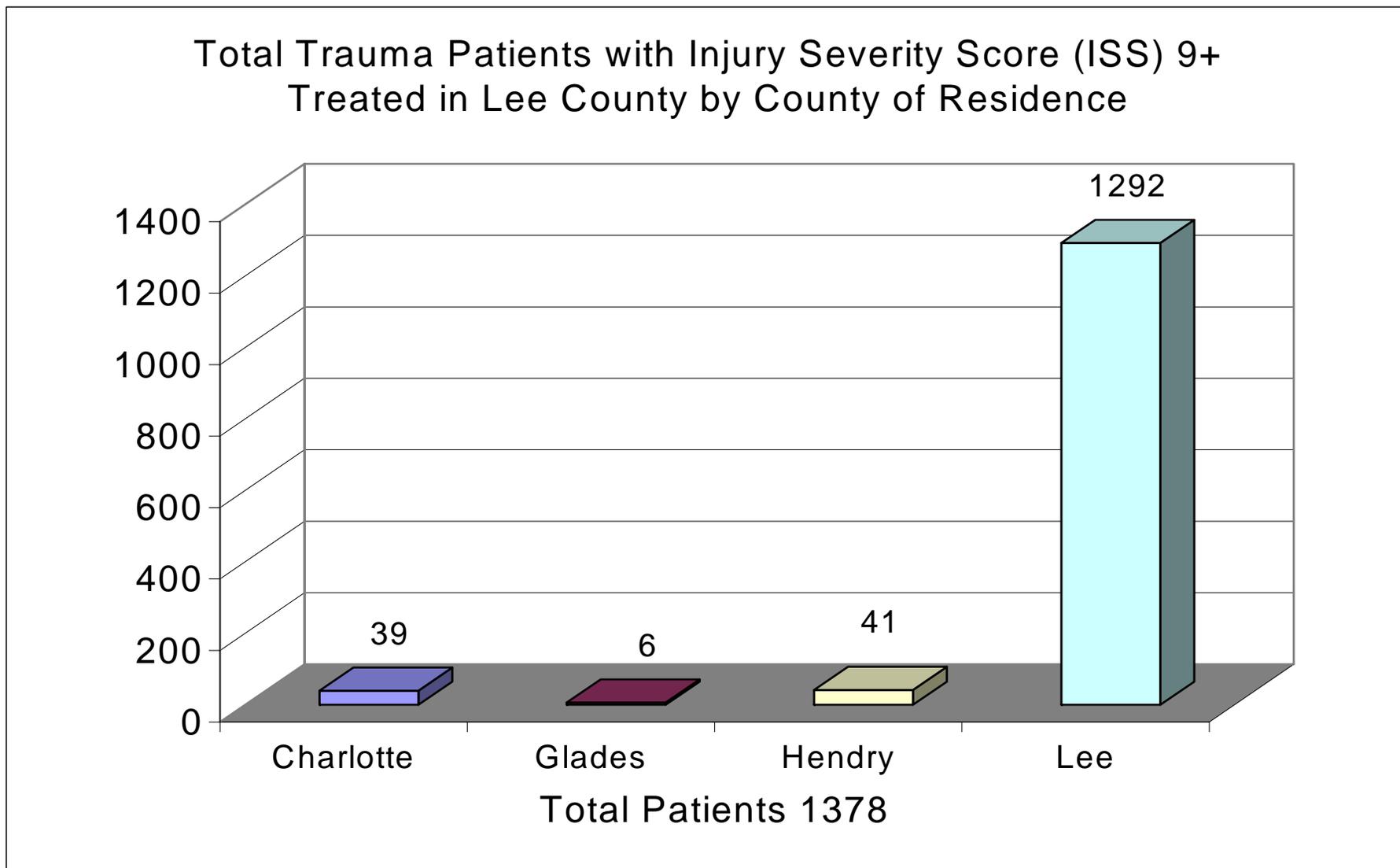
<b>Counties Sending to Nucleus County</b>			
Residence	<b>Martin</b>	<b>Okeechobee</b>	<b>St. Lucie</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	458	152	543
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Martin	387	4	40
Percent Residents Treated in Martin	84%	3%	7%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>			
<b>Okeechobee</b>			
Total		90	
Percentage of Total Served		59%	
<b>Palm Beach</b>			
Total		43	
Percentage of Total Served		28%	
<b>St. Lucie</b>			
Total			413
Percentage of Total Served			76%

### Trauma Service Area 15



Note: See Table 15-3 for supporting data.

### Trauma Service Area 15



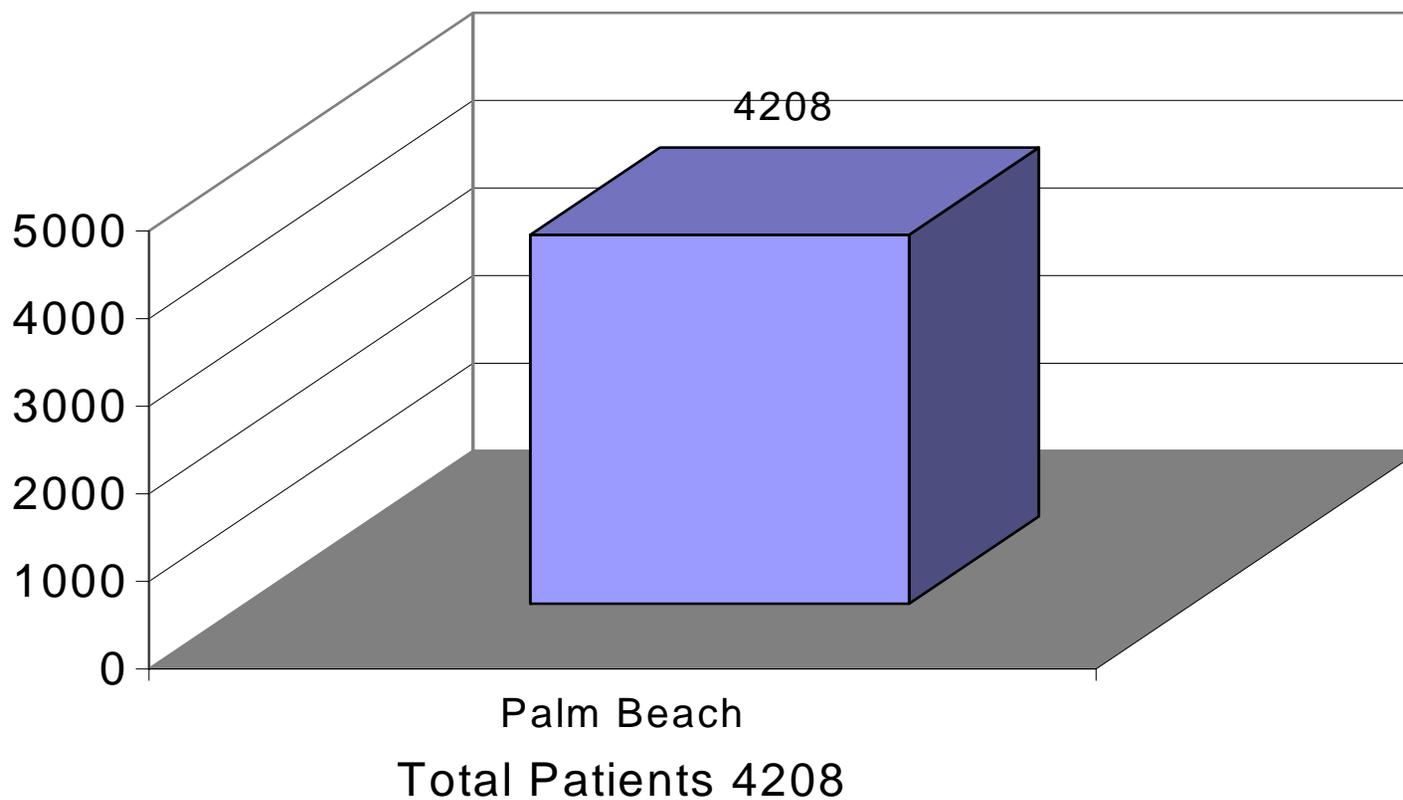
Note: See Table 15-3 for supporting data.

**Service Area 15**  
Nucleus County: Lee

<b>Counties Sending to Nucleus County</b>				
Residence	<b>Charlotte</b>	<b>Glades</b>	<b>Hendry</b>	<b>Lee</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	536	9	68	1415
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Lee	39	6	41	1292
Percent Residents Treated in Lee	7%	67%	60%	91%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>				
<b>Charlotte</b>				
Total	430			
Percentage of Total Served	80%			
<b>St. Lucie</b>				
Total				
Percentage of Total Served				
<b>Hendry</b>				
Total			14	
Percentage of Total Served			21%	

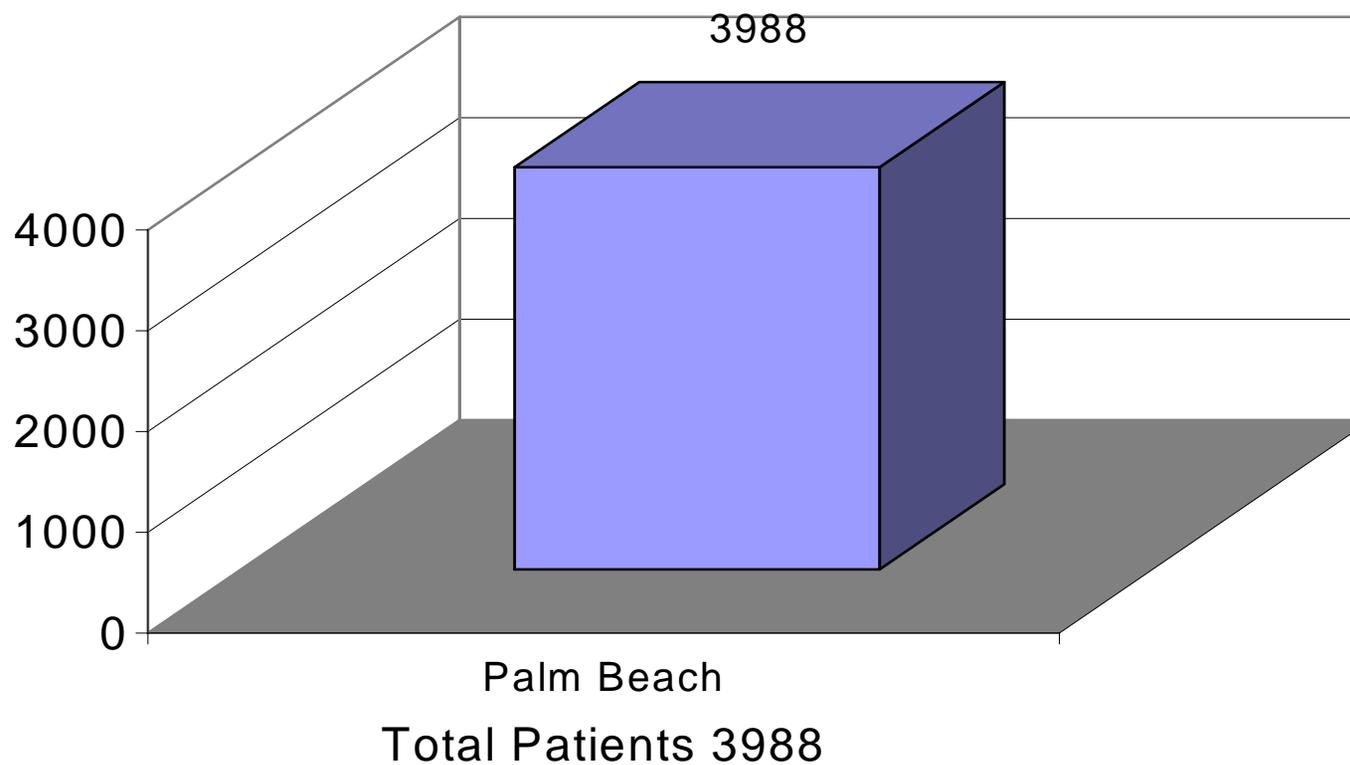
### Trauma Service Area 16

Total Trauma Patients Residing in Service Area  
with Injury Severity Scale (ISS) 9+



### Trauma Service Area 16

## Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Palm Beach County by County of Residence



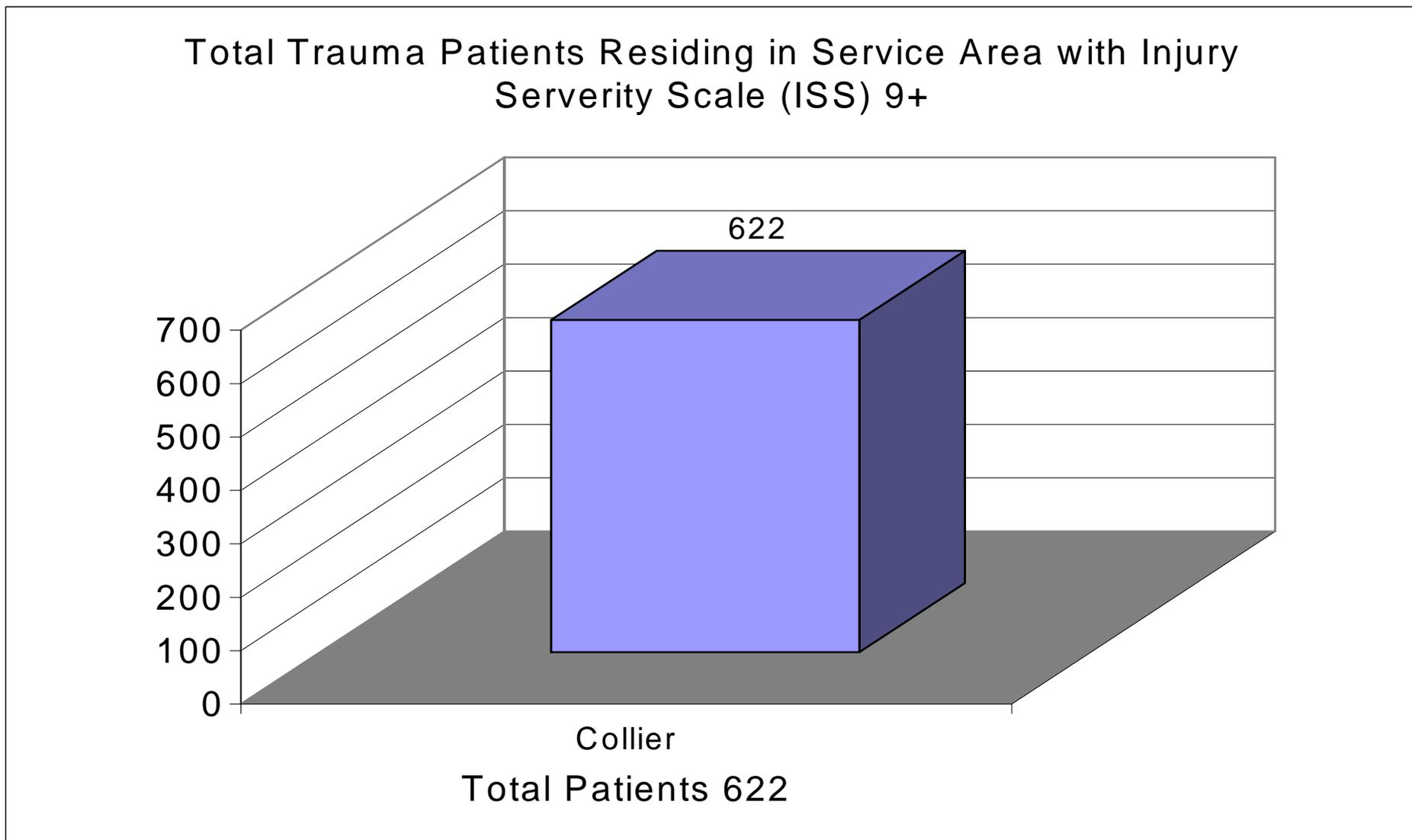
Note: See Table 16-3 for supporting data.

**Service Area 16**

Nucleus County: Palm Beach

<b>Counties Sending to Nucleus County</b>	
Residence	<b>Palm Beach</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	4208
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Palm Beach	3988
Percent Residents Treated in Palm Beach	95%
Counties Treating Significant Percentage of Sending County	

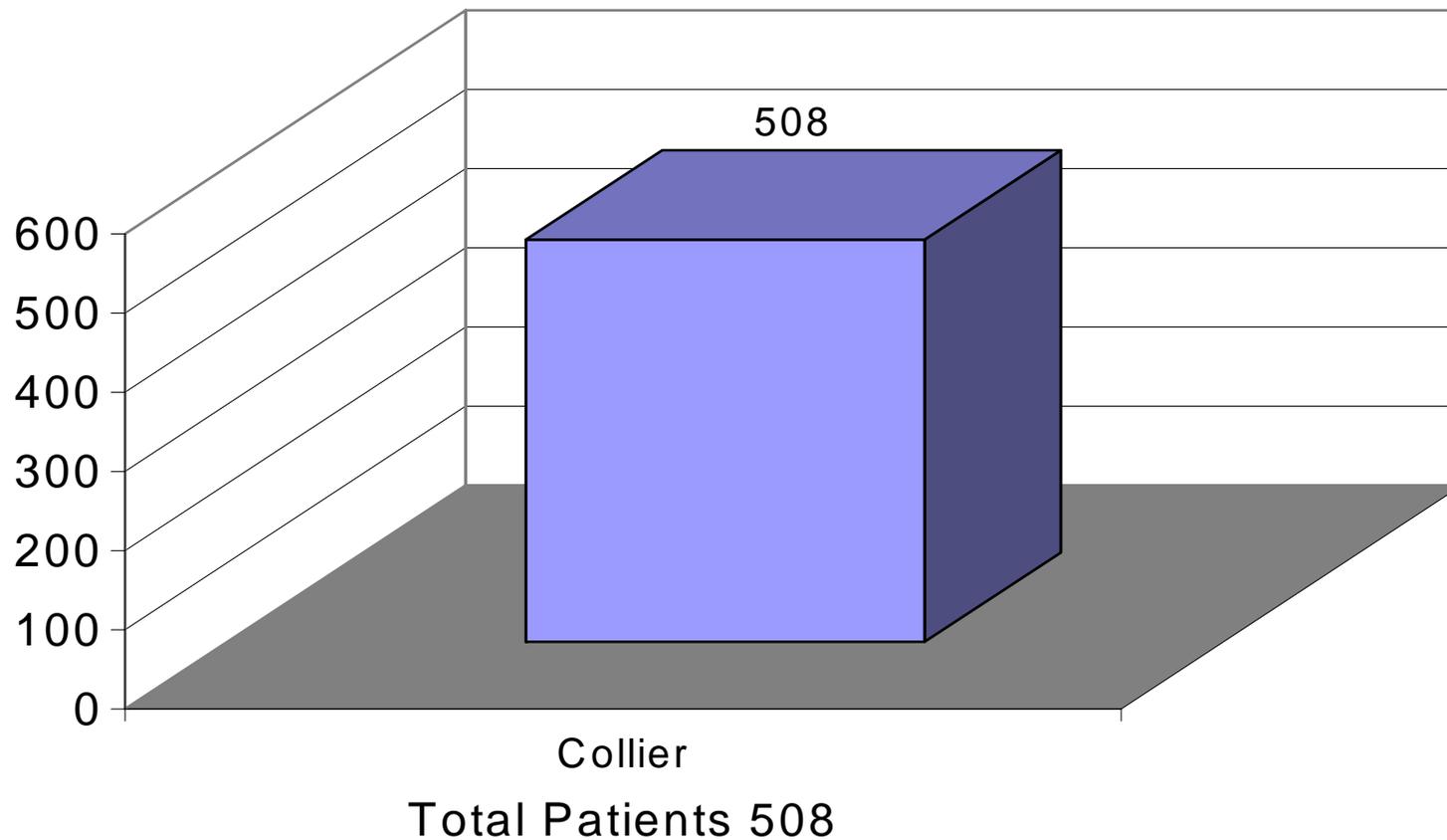
### Trauma Service Area 17



Note: See Table 17-3 for supporting data.

### Trauma Service Area 17

Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Collier County by County of Residence

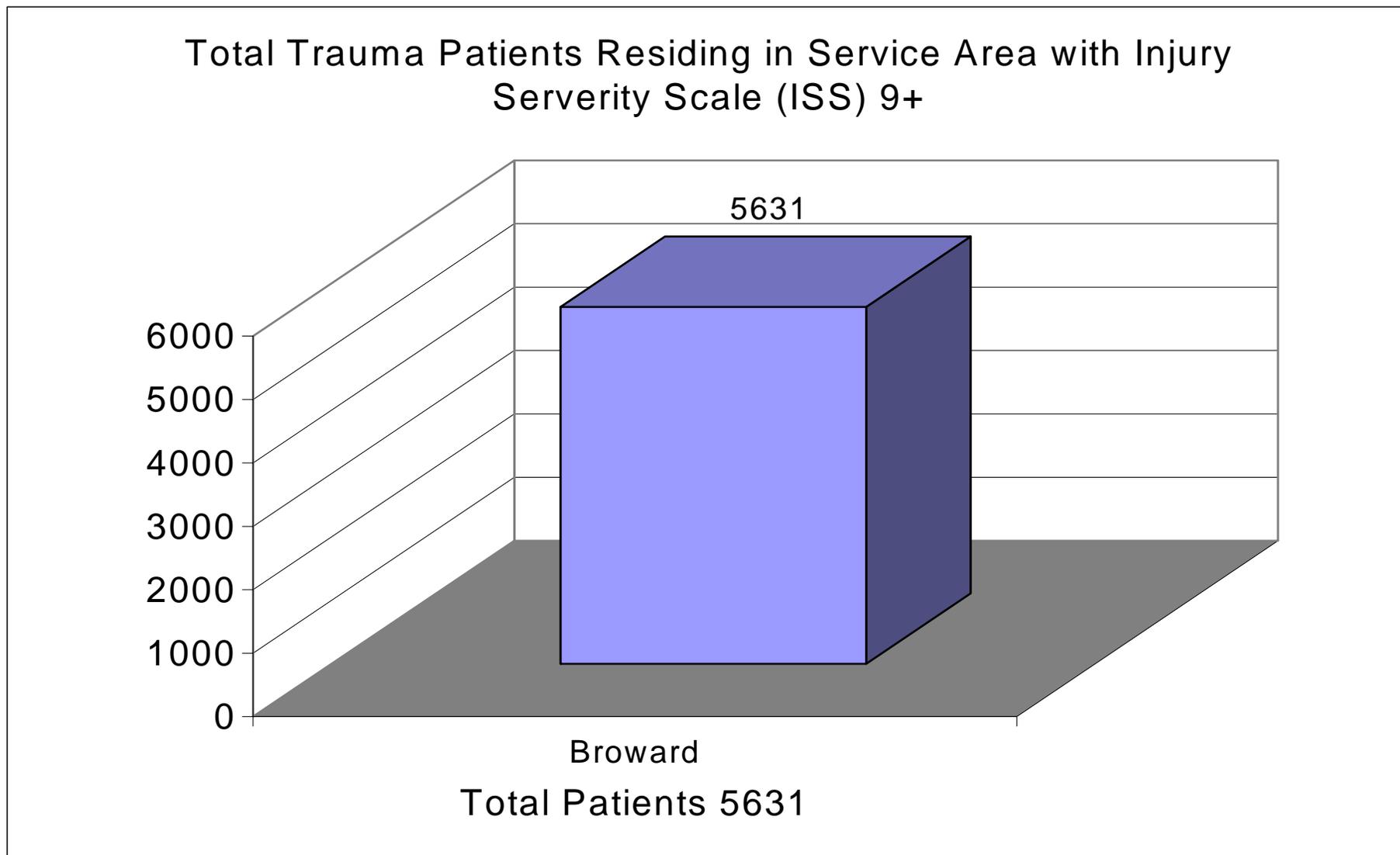


Note: See Table 17-3 for supporting data.

**Service Area 17**  
Nucleus County: Collier

<b>Counties Sending to Nucleus County</b>	
Residence	<b>Collier</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	622
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Collier	508
Percent Residents Treated Collier	82%
<b>Counties Treating Significant Percentage of Sending County</b>	
<b>Lee</b>	
Total	72
Percentage of Total Served	12%

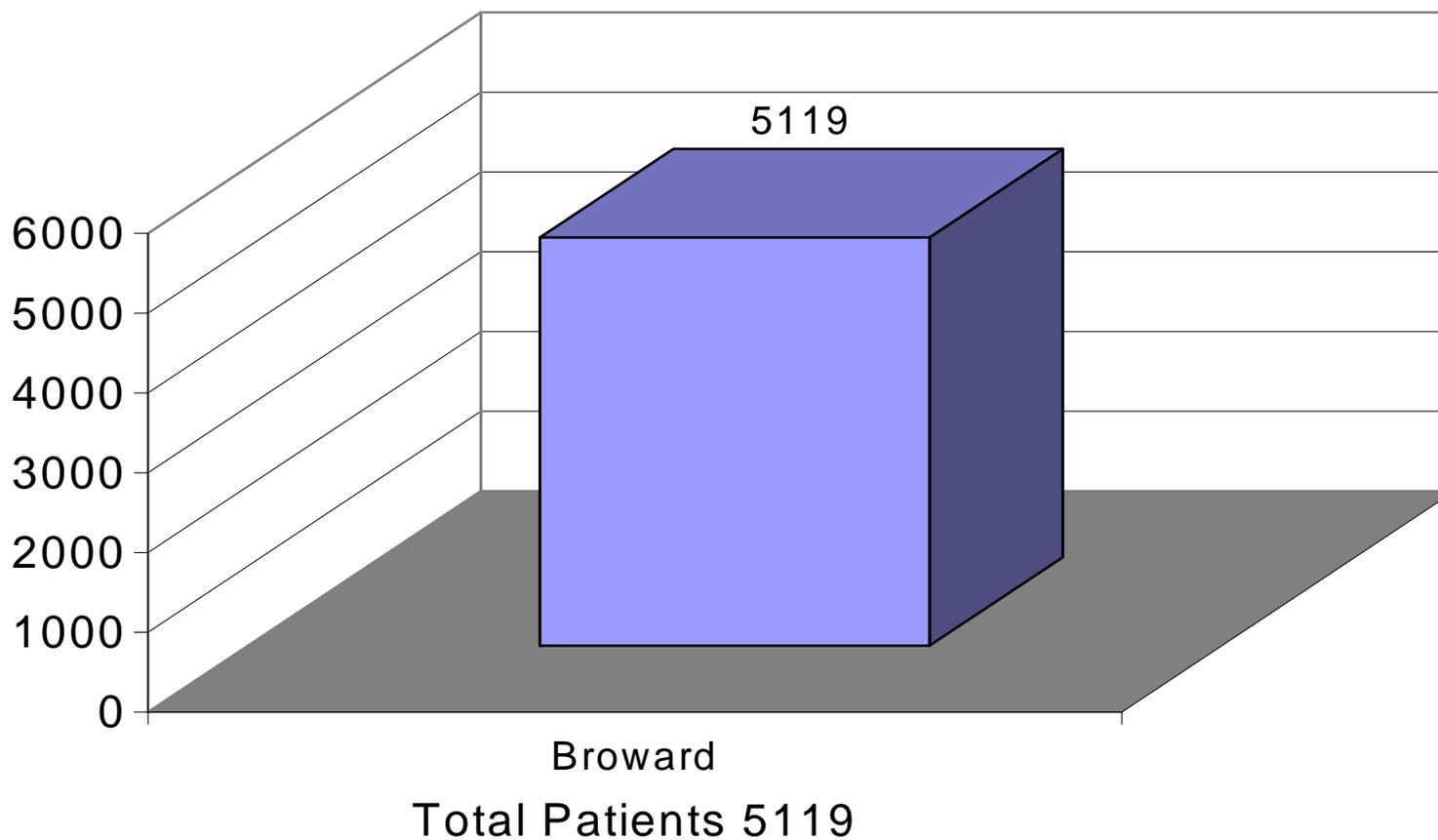
### Trauma Service Area 18



Note: See Table 1-3 for supporting data.

### Trauma Service Area 18

Total Trauma Patients with Injury Severity Score (ISS) 9+  
Treated in Broward County by County of Residence



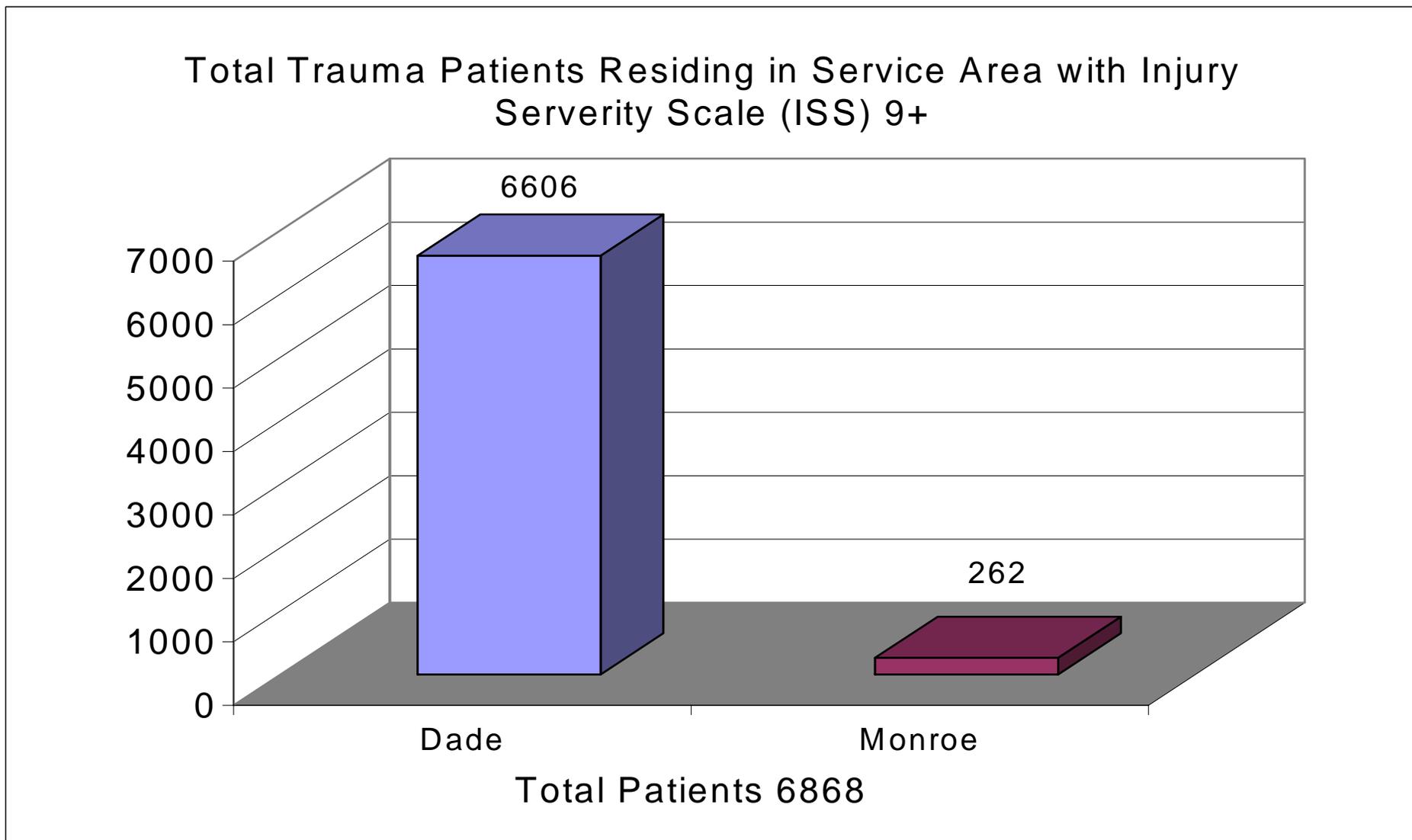
Note: See Table 18-3 for supporting data.

**Service Area 18**

Nucleus County: Broward

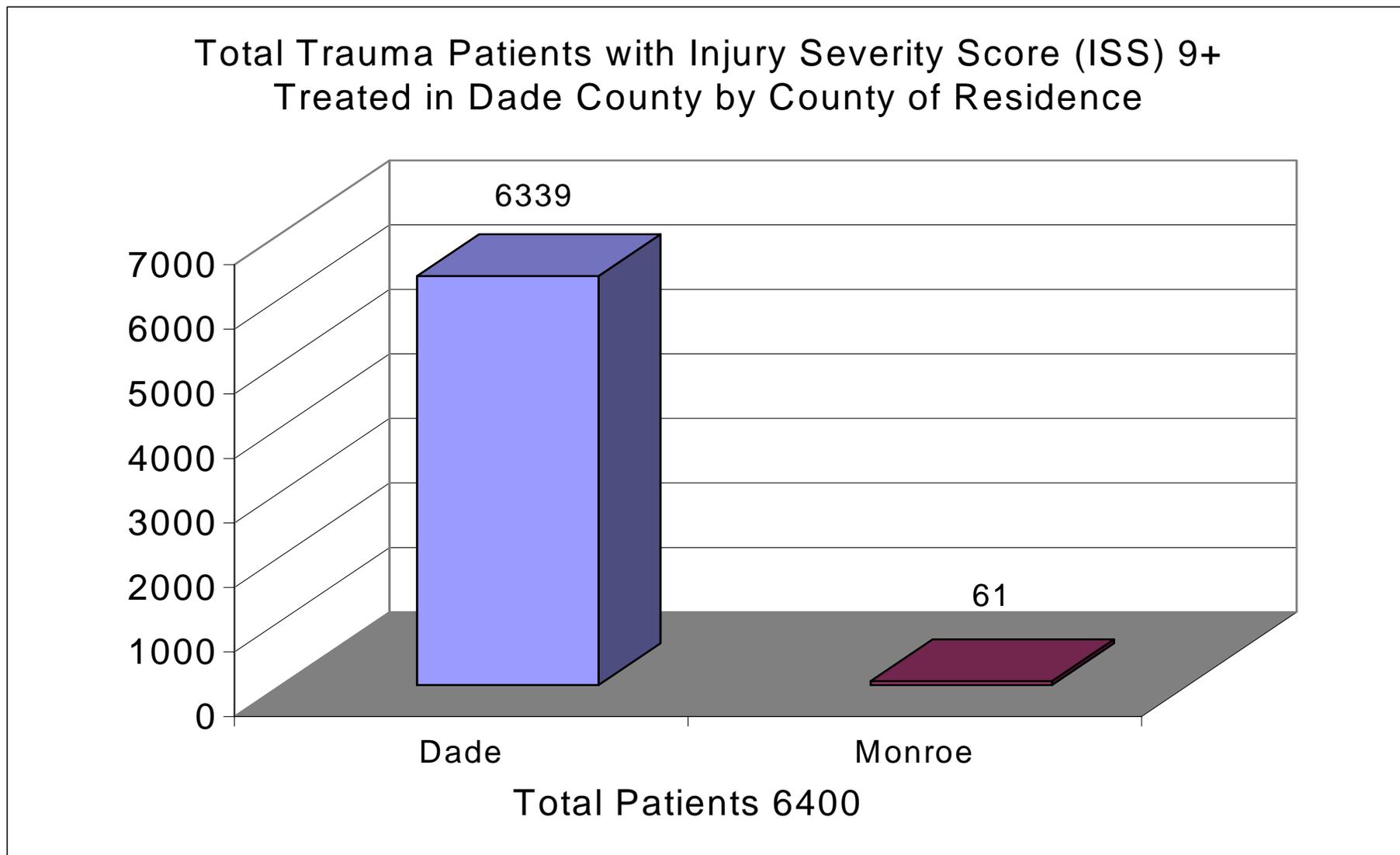
<b>Counties Sending to Nucleus County</b>	
Residence	<b>Broward</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	5631
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Broward	5119
Percent Residents Treated in Broward	91%
Counties Treating Significant Percentage of Sending County	

### Trauma Service Area 19



Note: See Table 19-3 for supporting data.

### Trauma Service Area 19



Note: See Table 19-3 for supporting data.

**Service Area 19**  
Nucleus County: Dade

<b>Counties Sending to Nucleus County</b>		
Residence	<b>Dade</b>	<b>Monroe</b>
Total Trauma Patients Residing in Service Area with Injury Severity Score (ISS) 9+	6606	262
Total Trauma Patients with Injury Severity Score (ISS) 9+ Treated in Dade	6339	61
Percent Residents Treated in Dade	96%	23%
<b>Counties Treating Significant Percentage of Residents of Counties Listed Above</b>		
<b>Monroe</b>		
Total		194
Percentage of Total Served		74%

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